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See Proposed Changes To Tech Specs

SUBJECT: Forwards mark up of NRC draft SE for conversion to Improved Tech Specs,containing util annotated comments.

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November 18, 1998

U. S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Subject: Duke Energy Corporation
Oconee Nuclear Station
Docket Numbers 50-269, -270, and -287
Improved Technical Specifications -
Comments on Draft Safety Evaluation (SE)
(TAC Nos. M99912, M99913 and M99914)

By letters dated October 19 and November 12, 1998, the NRC transmitted the draft Safety Evaluation (SE) for the conversion to Improved Technical Specifications. The letters requested comments on the draft SE.

The enclosure of this letter provides a markup of the draft SE with annotated comments.

If any additional information is needed, please call Noel Clarkson at (864) 885-3077.

Very truly yours,

for WRM

W. R. McCollum, Jr., Vice President
Oconee Nuclear Site

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Enclosures

xc: w/enclosure

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ENCLOSURE

OCONEE NUCLEAR STATION

COMMENTS ON THE ITS DRAFT SAFETY EVALUATION

Mr. W. R. McCollum
Vice President, Oconee Site
Duke Energy Corporation
P. O. Box 1439
Seneca, SC 29679

SUBJECT: DRAFT SAFETY EVALUATION OF PROPOSED IMPROVED TECHNICAL SPECIFICATIONS - OCONEE NUCLEAR STATION, UNITS I, 2, AND 3 (TAC NOS. M99912, M99913, AND M99914)

Dear Mr. McCollum:

By letter dated October 28, 1997, Duke Energy Corporation submitted proposed amendments to revise the Oconee Nuclear Station, Units 1, 2, and 3 Technical Specifications to be consistent with the Improved Standard Technical Specifications (ITS) conveyed by NUREG-1430. Additional information and supplements were submitted by letters dated on March 26, May 20, July 29, ~~August 13,~~ ~~and October 1, 1998,~~ October 21, October 28 and November 23, 1998.

The enclosed draft safety evaluation (SE) is for your review to verify its accuracy and to prepare the certified ITS for Oconee. In accordance with discussions with Mr. Noel Clarkson of your staff, you are requested to provide your comments on the draft SE, in writing, within 30 days. After the staff has reviewed your comments, it will incorporate changes, as appropriate, in the final SE which will be issued with the Oconee ITS amendments. The conclusions of the NRC staff in the enclosed draft SE are not valid until the final SE is issued.

Sincerely,

David E. LaBarge, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosure: Draft Safety Evaluation

cc w/encl: See next page

Mr. W. R. McCollum
Vice President, Oconee Site
Duke Energy Corporation
P. O. Box 1439
Seneca, SC 29679

SUBJECT: DRAFT SAFETY EVALUATION OF PROPOSED IMPROVED TECHNICAL SPECIFICATIONS - OCONEE NUCLEAR STATION, UNITS I, 2, AND 3 (TAC NOS. M99912, M99913, AND M99914)

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Sincerely,

David E. LaBarge, Senior Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-269, 50-270, and 50-287

Enclosure: Draft Safety Evaluation

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RELATED TO AMENDMENT NO. 300 TO FACILITY OPERATING LICENSE DPR-38

AMENDMENT NO. 300 TO FACILITY OPERATING LICENSE DPR-47

AND AMENDMENT NO. 300 TO FACILITY OPERATING LICENSE DPR-55

DUKE ENERGY CORPORATION

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

Oconee Nuclear Station, Units 1, 2, and 3 (Oconee) have been operating in accordance with Technical Specifications (TS) issued with the original operating licenses on February 6, 1973, October 6, 1973, and July 19, 1974, respectively, as modified by approved amendments. By letter dated October 28, 1997, as supplemented by letters dated March 26, May 20, July 29, ~~August 13,~~ October 1, ~~1998, and ???~~ October 21, October 28, and November 23, 1998, Duke Energy Corporation (DEC/the licensee) proposed to amend Appendix A of Facility Operating License Nos. DPR-38, DPR-47, and DPR-55, to completely revise the Oconee Units 1, 2, and 3 TS. The proposed amendment was based upon: (1) NUREG-1430, "Standard Technical Specifications Babcock and Wilcox Plants," Revision 1, dated April 1995; (2) guidance in the "NRC Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (Final Policy Statement), published on July 22, 1993 (58 FR 39132); and (3) the Criteria for TS Limiting Conditions for Operation of the Section 36 of Part 50 to Title 10 of the Code of Federal Regulations (10 CFR 50.36) as amended July 19,1995 (60 FR 36953). The overall objective of the proposed amendment, consistent with the cited regulatory guidance and requirements, was to rewrite, reformat, and streamline completely the existing TS for Oconee.

Hereinafter, the proposed TS are referred to as the improved TS (ITS), the existing Oconee TS are referred to as the current TS (CTS), and the TS in NUREG-1430 are referred to as the standard TS (STS). The corresponding TS Bases are ITS Bases, CTS Bases, and STS Bases, respectively.

In addition to basing the ITS on STS and the requirements of 10 CFR 50.36, the licensee ~~retained~~ used portions of the CTS as a basis for the ITS. Plant-specific issues, including design features, requirements, and operating practices, were discussed with the licensee during a series of conference calls and meetings that occurred ~~concluded~~ during the review process. Based on these discussions, the licensee revised its proposed changes in the supplemental submittals noted above. In addition, the licensee proposed matters of a generic nature that

were not in STS. The NRC staff requested that the licensee submit such generic issues as a proposed change to the STS through the Nuclear Energy Institute's Technical Specifications Task Force (TSTF). These generic issues were considered for specific applications in the Oconee ITS. Consistent with 10 CFR 50.36 ~~the Final Policy Statement~~ the licensee proposed transferring some CTS requirements to licensee-controlled documents. In addition, human factors principles were emphasized to add clarity to the CTS requirements being retained in the ITS and to define more clearly the appropriate scope of the ITS. ~~Further, significant changes were proposed to the CTS Bases to make each ITS requirement clearer and easier to understand.~~

The Staff's evaluation of the application, including supplements to the licensee's ITS proposal, submitted by letters that resulted from NRC requests for information and discussions with the licensee during the NRC staff review, is presented in this Safety Evaluation (SE). These plant-specific changes serve to clarify the ITS with respect to the regulatory requirements of 10 CFR 50.36 and the guidance in the STS.

During its review, the NRC staff relied on 10 CFR 50.36 ~~the Final Policy Statement~~ and the STS as guidance for acceptance of CTS changes. This SE provides a summary basis for the NRC staff conclusion that the licensee can develop ITS for Oconee based on STS, as modified by plant-specific changes, and that the use of the ITS is acceptable for continued operation. Part ~~III~~ 3.0 of this SE explains the further NRC staff conclusion that the conversion of the Oconee CTS to those based on STS, as modified by plant-specific changes, is consistent with the Oconee current licensing basis and the requirements of 10 CFR 50.36. The NRC staff also acknowledges that, as indicated in the Final Policy Statement, the conversion to STS is a voluntary process. Therefore, it is acceptable that the ITS differs from STS to reflect the current licensing basis. The NRC staff hereby approves the licensee's changes to the CTS with modifications documented in the revised submittals.

For the reasons stated *infra* in this SE, the NRC staff finds that the TS issued with these license amendments comply with Section 182a of the Atomic Energy Act, 10 CFR 50.36, and that they are in accord with the common defense and security and provide adequate protection of the health and safety of the public.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act requires that applicants for nuclear power plant operating licenses will state:

> [S]uch technical specifications, including information of the amount, kind, and source of special nuclear material required, the place of the use, the specific characteristics of the facility, and such other information as the Commission may, by rule or regulation, deem necessary in order to enable it to find that the utilization . . . of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public. Such technical specifications shall be a part of any license issued.

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. In doing so, the Commission placed emphasis on those matters related to the prevention of accidents and the mitigation of accident consequences; the Commission noted that applicants were expected to incorporate into their TS "those items that are directly related to maintaining the integrity of the physical barriers designed to contain radioactivity." Statement of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports," 33 FR 18610 (December 17, 1968). Pursuant to 10 CFR 50.36, TS are required to include items in the following five specific categories directly related to plant operation: (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS.

For several years, NRC and industry representatives have sought to develop guidelines for improving the content and quality of nuclear power plant TS. On February 6, 1987, the Commission issued an interim policy statement on TS improvements, "Interim Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" (52 FR 3788). During the period from 1989 to 1992, the utility Owners Groups and the NRC staff developed improved standard technical specifications that would establish models of the Commission's policy for each primary reactor type. In addition, the NRC staff, licensees, and Owners Groups developed generic administrative and editorial guidelines in the form of a "Writers Guide" for preparing technical specifications, which gives greater consideration to human factors principles and was used throughout the development of licensee-specific ITS.

In September 1992, the Commission issued NUREG-1430, which was developed using the guidance and criteria contained in the Commission's interim policy statement. STS were established as a model for developing improved TS for Babcock and Wilcox plants in general. STS reflect the results of a detailed review of the application of the interim policy statement criteria to generic system functions, which were published in a "Split Report" issued to the Nuclear Steam System Supplier (NSSS) Owners Groups in May 1988. STS also reflect the results of extensive discussions concerning various drafts of STS, so that the application of the TS criteria and the Writer's Guide would consistently reflect detailed system configurations and operating characteristics for all NSSS designs. As such, the generic Bases presented in NUREG-1430 provide an abundance of information regarding the extent to which the STS present requirements that are necessary to protect public health and safety.

On July 22, 1993, the Commission issued its Final Policy Statement, expressing the view that satisfying the guidance in the policy statement also satisfies Section 182a of the Act and 10 CFR 50.36 (58 FR 39132). The Final Policy Statement described the safety benefits of the improved STS, and encouraged licensees to use the improved STS as the basis for plant-specific TS amendments, and for complete conversions to improved STS. Further, the Final Policy Statement gave guidance for evaluating the required scope of the TS and defined the guidance criteria to be used in determining which of the LCOs and associated surveillances should remain in the TS. The Commission noted that, in allowing certain items to be relocated to licensee-controlled documents while requiring that other items be retained in the TS, it was adopting the qualitative standard enunciated by the Atomic Safety and Licensing Appeal Board

in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263, 273 (1979). There, the Appeal Board observed:

> [T]here is neither a statutory nor a regulatory requirement that every operational detail set forth in an applicant's safety analysis report (or equivalent) be subject to a technical specification, to be included in the license as an absolute condition of operation which is legally binding upon the licensee unless and until changed with specific Commission approval. Rather, as best we can discern it, the contemplation of both the Act and the regulations is that technical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety.

By this approach, existing LCO requirements that fall within or satisfy any of the criteria in the Final Policy Statement should be retained in the TS; those LCO requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. The Commission codified the four criteria in 10 CFR 50.36 (60 *FR* 36593, July 19, 1995). The ~~F~~four criteria are as follows: (8)

Criterion 1

> Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2

> A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 3

> A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

Criterion 4

> A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

3.0~~III~~. EVALUATION (3)

The NRC staff's ITS review evaluates changes to CTS that fall into five categories defined by the licensee and includes an evaluation of whether existing regulatory requirements are adequate for controlling future changes to requirements removed from the CTS and placed in licensee-controlled documents. This evaluation also discusses the NRC staff's plans for monitoring the licensee's implementation of these controls at Oconee.

In addition to the initial submittal of October 28, 1997, as supplemented, the NRC staff review identified the need for clarifications and additions to the submittal in order to establish an appropriate regulatory basis for translation of current TS requirements into ITS. Each change proposed in the amendment request is identified as either a discussion of change (DOC) to CTS or a justification for deviation from STS. The NRC staff comments were ~~documented as requests for additional information (RAIs) and~~ forwarded to the licensee for response. The licensee provided written responses to the NRC staff requests in letters dated March 26, 1998 (Supplement 1 to the original ITS submittal); May 20, 1998 (RAI response); July 29, 1998 (Supplement 2 to the original ITS submittal); October 1 (supplement 3 to the original ITS submittal) ~~and~~ October 21 ~~August 13, 1998~~ (RAI response), October 28 (supplement 4 to the original ITS submittal), and November 23, 1998 (supplement 5 to the original ITS submittal). In addition, by letter dated April 8, 1998 (and revision dated May 25, 1998) the licensee submitted Amendment 23 to the Duke Energy ~~Corporation Oconee~~ Quality Assurance Program that contained ~~provisions pertaining to the ITS review~~ requirements that were relocated during the ITS conversion. These letters clarified and revised the licensee's basis for translating CTS requirements into ITS. The NRC staff finds that the licensee's submittals provide sufficient detail to allow the staff to reach a conclusion regarding the adequacy of the licensee's proposed changes.

The license amendment application was organized such that changes were included in each of the following CTS change categories, as appropriate: administrative changes, technical changes - less restrictive (specific), technical changes - less restrictive (generic), technical changes - more restrictive, and relocated specifications.

(1) Administrative Changes, (See Table A, listing the non-technical changes in the presentation of existing requirements);

(2) Technical Changes - More Restrictive, (See table M, listing new or additional requirements in the ITS);

(3) Technical Changes - Less Restrictive (specific), (See Table L, listing changes, deletions and relaxations of CTS requirements);

(4) Technical Changes - Less Restrictive (generic), (See Table LA, listing deletion of existing TS requirements by movement of information and requirements from existing specifications (that are otherwise being retained) to licensee-controlled documents, including TS Bases); and

(5) Relocated Specifications, (See Table R, listing relaxations in which whole specifications (the LCO and associated action and SR) are removed from the

existing TS (an NRC-controlled document) and placed in licensee-controlled documents).

These general categories of changes to the licensee's current TS requirements and STS differences may be better understood as follows:

A. Administrative Changes

Administrative (non-technical) changes are intended to incorporate human factors principles into the form and structure of the ITS so that plant operations personnel can use them more easily. These changes are editorial in nature or involve the reorganization or reformatting of CTS requirements without affecting technical content or operational restrictions. Every section of the ITS reflects this type of change. In order to ensure consistency, the NRC staff and the licensee have used STS as guidance to reformat and make other administrative changes. Among the changes proposed by the licensee and found acceptable by the NRC staff are:

(1) providing the appropriate numbers, etc., for STS bracketed information (information that must be supplied on a plant-specific basis and that may change from plant to plant);

(2) identifying plant-specific wording for system names, etc.;

(3) changing the wording of specification titles in STS to conform to existing plant practices;

(4) splitting up requirements currently grouped under a single current specification to more appropriate locations in two or more specifications of ITS;

(5) combining related requirements currently presented in separate specifications of the CTS into a single specification of ITS;

(6) presentation changes that involve rewording or reformatting for clarity (including moving an existing requirement to another location within the TS) but which do not involve a change in requirements;

(7) wording changes and additions that are consistent with current interpretation and practice, and that more clearly or explicitly state existing requirements; and,

(8) deletion of redundant TS requirements that exist elsewhere in TS or the Commission's regulations.

Table A lists the administrative changes proposed in ITS. Table A is organized by the corresponding ITS section discussion of change, and provides a summary description of the administrative change that was made, and CTS and ITS LCO references. The licensee's markup of the CTS requirements characterized the removal of the CTS Bases (that are located in the CTS after the applicable Specifications) and the adoption of the ITS Bases as administrative changes, and identified them with discussion of change (DOC) numbers listed in Table A. ~~The summary descriptions for these items are noted as "Not Applicable" since they do~~

(5)

~~not constitute an administrative change in TS requirements.~~ The NRC staff reviewed all of the administrative and editorial changes proposed for incorporation in the ITS by the licensee and found them acceptable, because they are compatible with the Writers Guide and STS, do not result in any substantive change in operating requirements and are consistent with the Commission's regulations.

B. Technical Changes - More Restrictive

The licensee, in electing to implement the specifications of STS proposed a number of requirements more restrictive than those in the CTS. ITS requirements in this category include requirements that are either new, more conservative than corresponding requirements in the CTS, or that have additional restrictions that are not in the CTS but are in STS. Examples of more restrictive requirements are placing an LCO on plant equipment which is not required by the CTS to be operable, more restrictive requirements to restore inoperable equipment, and more restrictive SRs. Table M lists all the more restrictive changes proposed in ITS. Table M is organized by the corresponding ITS section discussion of change and provides a summary description of the more restrictive change that was adopted, and ITS and CTS Section references. The staff has reviewed these changes. These changes are additional restrictions on plant operation that enhance safety and are acceptable.

C. Technical Changes - Less Restrictive (Specific)

Less restrictive requirements include changes, deletions and relaxations to portions of CTS requirements that are not being retained in ITS. When requirements have been shown to have little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (1) generic NRC actions, (2) new staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups comments on STS. The NRC staff reviewed generic relaxations contained in the STS and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The Oconee design was also reviewed to determine if the specific design basis and licensing basis are consistent with the technical basis for the model requirements in STS, and thus provide a basis for ITS. A significant number of changes to the CTS involved changes, deletions and relaxations to portions of current TS requirements evaluated as Categories I through VIII that follow:

Category I - Relaxation of Applicability

Category II - Relaxation of Surveillance Frequency

Category III - Relaxation of LCO Requirement

Category IV - Action ~~Allowed Outage Time~~ Added

Category V - Deletion of Requirement for 30 day Special Report to NRC ~~Relaxation of Required Actions to exit Applicability~~

Category VI - Relaxation of Surveillance Requirement Acceptance Criteria

Category VII - Relaxation of Completion Time

~~Category VIII - Deletion of Requirement for 30 day Special Report to NRC~~ (7)

The following discussions address why various technical specifications within each of the eight categories of information or specific requirements are not required to be included in ITS .

Relaxation of Applicability *(Category I)*

Reactor operating conditions are used in CTS to define when the LCO features are required to be operable. CTS applicabilities can be specific defined terms of reactor conditions: hot shutdown, cold shutdown, reactor critical or reactor power operating condition. Applicabilities can also be more general. Depending on the circumstances, CTS may require that an LCO be met " at all system conditions except refueling" or "during power operation." For shutdown conditions, CTS may require that an LCO be met "during vessel head removal" or "while loading and unloading fuel." Generalized applicability conditions are not contained in STS, therefore ITS eliminate CTS requirements such as those noted, replacing them with ITS defined modes or applicable conditions that are consistent with the application of the plant safety analysis assumptions for operability of the required features.

In another application of this type of change, CTS requirements may be eliminated during conditions for which the safety function of the specified safety system is met because the feature is performing its intended safety function. Deleting applicability requirements that are ambiguous or which are inconsistent with application of accident analyses assumptions is acceptable because when LCOs cannot be met, the TS may be ~~are~~ satisfied by exiting the applicability thus taking the plant out of the conditions that require the safety system to be operable. These changes are consistent with STS and changes specified as Category I are acceptable. (10)

Relaxation of Surveillance Frequency *(Category II)*

CTS and ITS surveillance frequencies specify time interval requirements for performing surveillance requirement testing. ~~Increasing the time interval between surveillance tests in the ITS results in decreased equipment unavailability due to test which also increases equipment availability.~~ In general, the STS contain test frequencies that are consistent with industry practice or industry standards for achieving acceptable levels of equipment availability. Adopting testing practices specified in the STS is acceptable based on similar design, like-component testing for the system application and ~~the availability of~~ other TS provisions ~~requirements~~ which provide regular checks to ensure requirements ~~limits~~ are met. (11) (8) (8)

Reduced testing can result in a safety enhancement because the unavailability due to testing is reduced; in turn, availability of the affected structure, system or component should remain constant or increase. Reduced testing is acceptable where operating experience, industry practice or the industry standards such as manufacturers' recommendations have shown

that these components usually pass the surveillance when performed at the specified interval; Thus, the frequency is acceptable from an availability standpoint. Additionally, surveillance frequency extension can be based on staff-approved topical reports. The NRC staff has accepted topical report changes where topical report analyses bound the plant-specific design and component reliability assumptions. These changes are consistent with STS and changes specified as Category II are acceptable.

Relaxation of LCO Requirement *(Category III)*

CTS provides descriptions of acceptable devices that may be used to satisfy LCO requirements. The ITS reflect the STS approach to provide LCO requirements ~~necessary that specify the protective limit that is required~~ to meet safety analysis assumptions for required features. The requirements ~~protective limits~~ replace the descriptions of specific devices previously found to be acceptable to the NRC staff for meeting the LCO. The ITS changes provide the same degree of protection required by the safety analysis and provide flexibility for meeting requirements ~~limits~~ without adversely affecting operations since equivalent features are required to be operable. These changes are consistent with STS and changes specified as Category III are acceptable.

Action ~~Allowed Outage Time~~ Added *(Category IV)*

Upon discovery of a failure to meet an LCO, STS specify times for completing required actions of the associated ~~TS~~ conditions. Required actions of the associated conditions are used to establish ~~remedial~~ measures that must be taken within specified completion times (Actions ~~allowable outage times~~). These times define limits during which operation in a degraded condition is permitted. In the absence of Actions ~~allowable outage times~~ due to the failure of CTS to address the specific condition that an LCO is not met, the only other alternative may be a unit shutdown. A shutdown under these conditions would be overly restrictive and not warranted based on the fact that other systems or components would be available to perform a safety function.

Adopting Actions ~~completion times~~ from the STS is acceptable because the Actions ~~completion times~~ take into account the operability status of the redundant systems of TS required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a design basis accident (DBA) occurring during the ~~time repair~~ period. These changes are consistent with STS and therefore, changes specified as Category IV are acceptable.

Deletion of Requirement for 30 day Special Report to NRC *(Category V)*

CTS include requirements to submit Special Reports when specified ~~limits~~ requirements are not met. Typically, the time period for the report to be issued is within 30 days. However, the STS eliminates the TS administrative control requirements for Special Reports and instead relies on the reporting requirements of 10 CFR 50.73. ITS changes to reporting requirements are acceptable because 10 CFR 50.73 provides adequate reporting requirements, and the special reports do not affect continued plant operation. Therefore, this change has no adverse impact of the safe operation of the plant. Additionally, deletion of TS

reporting requirements reduces the administrative burden on the plant and allows efforts to be concentrated on restoring TS requirements required limits. These are changes consistent with STS and changes specified as Category V are acceptable.

~~Relaxation of Required Actions to exit Applicability *(Category V)*~~

~~CTS require that in the event specified LCOs are not met, penalty factors to reactor operation, such as resetting setpoints, and power reductions shall be initiated as the method to reestablish the appropriate limits. The ITS are constructed to specify actions for conditions of required features that are inoperable. Adopting ITS action requirements for exiting LCO applicabilities is acceptable because the plant remains within analyzed parameters by performance of required actions, or the actions are constructed to minimize risks associated with continued operation while providing time to repair inoperable features. Such actions add margin to safety or verify equipment status such as interlock status for the mode of operation, thereby providing assurance that the plant is configured appropriately or operations that could result in a challenge to safety systems are exited in a time period that is commensurate with the safety importance of the system. Additionally, other changes to TS actions include placing the reactor in a mode where the specification no longer applies, usually resulting in an extension to the time period for taking the plant into shutdown conditions. These actions are commensurate with industry standards for reductions in thermal power in an orderly fashion without compromising safe operation of the plant. These changes are consistent with STS and changes specified as Category V are acceptable.~~

Relaxation of Surveillance Requirement Acceptance Criteria *(Category VI)*

CTS require safety systems to be tested and verified operable when in applicable conditions. ITS provide the flexibility to verify operability by actual or test conditions. Adopting the STS allowance for "actual" conditions is acceptable because TS required features cannot distinguish between an "actual" signal or a "test" signal. Category VI also includes changes to CTS requirements that are replaced in the ITS with separate and distinct testing requirements which when combined include operability verification of all TS required components for the features specified in the CTS. Adopting this format preference in the STS is acceptable because TS SRs that remain include testing of all previous features required to be verified operable. These changes are consistent with STS and changes specified as Category VI are acceptable.

Relaxation of Completion Time *(Category VII)*

Upon discovery of a failure to meet an LCO, STS specify times for completing required actions of the associated TS conditions. Required actions of the associated conditions are used to establish ~~remedial~~ measures that must be taken within specified completion times. These times define limits during which operation in a degraded condition is permitted.

Adopting completion times from the STS is acceptable because completion times take into account the operability status of the redundant systems of TS required features, the capacity and capability of remaining features, a reasonable time for repairs or replacement of required features, and the low probability of a design basis accident (DBA) occurring during the time

~~repair~~ period. These changes are consistent with the STS, and completion time extensions specified as Category VII are acceptable.

~~Deletion of Requirement for 30-day Special Report to NRC *(Category VIII)*~~

~~CTS include requirements to submit Special Reports when specified limits are not met. Typically, the time period for the report to be issued is with 30 days. However, the STS eliminates the TS administrative control requirements for Special Reports and instead relies on the reporting requirements of 10 CFR 50.73. ITS changes to reporting requirements are acceptable because 10 CFR 50.73 provides adequate reporting requirements, and the special reports do not affect continued plant operation. Therefore, this change has no adverse impact of the safe operation of the plant. Additionally, deletion of TS reporting requirements reduces the administrative burden on the plant and allows efforts to be concentrated on restoring TS required limits. These are changes consistent with STS and changes specified as Category VIII are acceptable.~~

Table L lists all the less restrictive changes proposed in the ITS. Table L is organized by the corresponding ITS specification discussion of change, e.g., 1.0 L.1 (ITS Section 1.0, DOC L.1); and provides a summary description of the less restrictive change that was adopted, CTS and ITS reference and category of change.

Additionally, in electing to implement the specifications of STS, the licensee also proposed a number of less restrictive changes to the CTS which do not apply to the above Categories of changes, deletions and relaxations of CTS requirements. These changes are discussed below. The associated discussion of change identifier (e.g., L2) is provided for these unique less restrictive changes.

Section 1.0 - Less Restrictive

L2 The definition of Channel Calibration was revised to allow resistance thermal detectors (RTDs) and thermocouples to be excluded from the channel and an in place qualitative assessment of sensor behavior to be used for these devices. CTS 1.5.4 defines Instrument Channel Calibration to encompass the entire channel and does not exclude resistance temperature devices (RTDs) and thermocouples. For channels with RTDs and/or thermocouples, the ITS definition of Channel Calibration allows performing "...an in place qualitative assessment of sensor behavior..." for these devices. This change is a less restrictive requirement for unit operations and is consistent with the STS. A qualitative assessment of sensor behavior is acceptable for RTDs and thermocouples since the operation of these devices is governed by well understood and predictable physical relationships between the temperature of the sensed medium and the output of the RTD or thermocouple. Additionally, RTD and thermocouple output readings are not adjustable. These devices are reliable and not subject to drift in the same manner as other sensors ~~provided to operators in the same manner as that of other sensors~~. As a result a qualitative assessment of sensor behavior is sufficient to determine its Operability and is, therefore, acceptable.

Section 2.0 - Less Restrictive

L2 The reporting period for a SL Violation is extended from 10 days to 30 days with the removal of the CTS requirements and the application of the requirements to notify the Commission as stipulated in 10 CFR 50.36(c)(1)(I)(A). 10 CFR 50.36 requires licensees to submit an LER as required by 50.73. The elimination of the 10 day report and replacement with the 30 day report required by 10 CFR 50.73 is acceptable since the additional time allowed by 10 CFR 50.36 has no affect on plant safety. ~~This change is acceptable since the referenced provisions of 10 CFR 50.73(g), *"Reportable Occurrences,"* specifically states that the provisions contained therein replace all existing requirements for licensees to report Reportable Occurrences as defined in individual plant Technical Specifications. Hence, the TS requirements were superseded by the Licensee Event Report rule.~~ (13)

Section 3.1 - Less Restrictive

L8 In the event a trippable control rod is declared inoperable, CTS 3.5.2.2.d.2.a requires the shutdown margin to be verified, and either reactor thermal power reduced and the nuclear overpower trip setpoints reduced or the remaining rods in the affected group be positioned such that the inoperable rod is maintained within allowable group average limits. CTS 3.5.2.2.d.2.a was revised to allow either the verification of shutdown margin or the aligning of all Control Rods in the group to within allowable group average limits. Since either of these actions as specified in the ITS provides an acceptable level of safety for an inoperable but trippable control rod, this change is ~~therefore~~ acceptable. (8)

Section 3.2 - Less Restrictive

L2 CTS 3.5.2.4.g requires the QUADRANT POWER TILT (QPT) to be monitored on a minimum frequency of once every 2 hours. This was changed to a frequency of 7 days, and, when QPT has been restored to less than or equal to the steady state limit, once per hour for 12 consecutive hours, or until verified acceptable at ≥ 95% Rated Thermal Power. Since ~~a~~ QPT changes does not occur over a short period of time, monitoring the QPT every 2 hours is an excessive requirement. The 7 day frequency is acceptable since the ~~Q~~QPT mechanisms, such a xenon redistribution and burnup gradients cause slow development of a QPT. However, the more frequent monitoring as required following restoration of the QPT to within steady state limits determines whether the period of any oscillation due to xenon redistribution would cause the QPT to exceed the steady state limit again. ~~of the QPT to within steady state limits provides a balanced approach considering the potential for xenon redistribution that may occur concurrent with the corrective action.~~ Therefore, this change is acceptable. (8) (14)

Section 3.3 - Less Restrictive

L1 CTS Table 3.5.1-1 Note (a) allows the minimum of three OPERABLE channels to be maintained during channel testing, calibration, or maintenance by placing one of the four available channels in bypass and one of the four available channels in the tripped condition leaving an effective one out of two trip logic. In contrast the ITS address ~~remedial~~ actions to be taken for 1 and 2 inoperable channels that does not restrict the cause under which a channel may become inoperable, be it testing, calibration, (8)

maintenance, or any other activity. The ~~remedial~~ actions provide an acceptable level of safety for the specified condition without the need to restrict the manner in which the facility arrives at that condition. The is consistent with the STS requirements and is acceptable.

L2 CTS 3.5.1.1 requires the RPS functions of Table 3.5.1-1 to be operable when the reactor is in a startup mode or in a critical state (equivalant to ITS MODES 1 and 2). The Applicability statement for the Main Turbine Trip (Hydraulic Fluid Pressure) was changed to MODE 1 with Thermal Power > 30% Rated Thermal Power. The Applicability statement for the Loss of Main Feedwater Pumps (Hydraulic Oil Pressure) was changed to MODE 1 and MODE 2 with Thermal Power > 2% Rated Thermal Power. In the ITS, the applicability of RPS requirements are stated on the basis of individual functions based on when those functions must be capable of preforming their safety actions, consistent with assumptions of the safety analysis. For this reason, these changes are acceptable.

L8 CTS Table 4.1-1 Item 4 requires a calibration of the power range instruments against the incore instruments be performed monthly. This calibration is also required to be performed after each startup if not performed within the previous week. The requirement to perform the calibration after each startup was deleted. The ITS provides separate surveillance requirements for different trip functions involving the power range instruments. ITS SR 3.3.1.2 requires comparison and adjustment as necessary ~~calorimetric calibration~~ of the power range channels ~~detectors being performed~~ on a 24 hour frequency. Since deviations between the incore and excore detectors for the axial power imbalance generally occurs slowly, and the 31 day calibration frequency is consistent with the STS, this change is acceptable.

L13 CTS 3.5.1.1 requires the source range and wide range instruments to be operable in a startup mode or in a critical state. CTS Table 3.5.1-1 Note b provides a relaxation of action requirements when "2 of 4 power range instrument channels are greater than 10% rated power." These requirements were changed by eliminating the operability requirements for the source range and wide range instrument channels above MODE 2 (> 5% rated power). The power range channels provide the assumed reactor protection function during these conditions ~~which is assumed by the safety analysis~~. This change is acceptable since the source and wide ~~intermediate~~ range channels do not perform a required safety function under the revised conditions under which they are not required to be operable.

L18 CTS 3.5.7's Applicability for the Main Steam Line Break and Feedwater Isolation Circuits is when main steam header ~~pressure is greater than 700 psig. The Applicability was changed to MODES 1 and 2, and MODE 3 with main steam header pressure greater than 700 psig except~~ modified to also exclude LCO requirements when all main feedwater control valves (MFCVs) and startup feedwater control valves (SFCVs) are closed. The safety function for these circuits is performed when the ~~specified noted~~ valves are closed. Therefore, there is no further need for it to be operable and this change is acceptable.

L20 A Note was added to exclude the neutron detectors from the requirement to perform Channel Calibrations. Neutron detectors respond based on their physical characteristics and do not satisfy specific calibration requirements in themselves. The power range channels that utilize the output of the detectors are calibrated to produce a measurement signal that is representative of reactor power, consistent with the STS requirements. Therefore, this change is acceptable and reflects past practice. (8)

L21 CTS Table 3.5.6-1 Action 3 for the Reactor Vessel Head Level and the Reactor Vessel Level allows, if repairs are feasible, 7 days for restoration of a single inoperable instrument channel when one or both instrument channels are inoperable. Operation may continue with one inoperable channel, provided a report is submitted within the next 30 days outlining the cause of the inoperability and the plans and schedule for restoring the channel to operable status. When both are inoperable, if at least one instrument channel is not restored, the unit is then required to be in hot shutdown within 12 hours. These actions were changed to allow 30 days for restoration of a single channel, and allow 7 days for restoration of one of two inoperable instrument channels. Additionally, the requirement to shutdown the unit was replaced with a requirement to submit a Special Report. The vessel level instruments are not Regulatory Guide (RG) 1.97 (16) Type ~~Category~~ A instrumentation, i.e., parameters which the reactor operators need for the manual initiation of safety actions. These parameters are Type ~~Category~~ B (16) instrumentation, i.e., they are used to for monitoring adequate core cooling, and are backed up by other instrumentation for this same purpose, namely, the subcooling monitors and core exit temperature measurements. The less restrictive requirements, which are consistent with the NUREG requirements, are appropriate and, therefore, acceptable.

L22, L23, and L24 CTS Table 3.5.6-1 Actions 1, 2, and 4 include requirements for (1) Containment Pressure - High Range Function; (2) Containment Water Level, Containment High-Range Radiation, Containment Hydrogen, and the Core Exit Thermocouple Functions; and (3) Subcooling Monitor Function that are similar to those noted for L21 above with respect to restoring inoperable Post Accident Monitoring instrumentation to operable status and includes the same shutdown requirements that apply when that instrumentation is not restored within 30 days. This is appropriate in lieu of a shutdown requirement since alternative actions are identified before loss of functional capability and given the likelihood of unit conditions that would require information provided by this instrumentation. ~~This instrumentation is Type Category B instrumentation as defined by RG 1.97, and is not relied upon for accident mitigation, but rather is used to verify the status of mitigation systems. There is diversity in its use since the essential information derived by one set of instrumentation is backed up by information derived by another set.~~ (16) The changes are consistent with the NUREG for all the ~~remedial~~ actions to be taken when any of this instrumentation is inoperable and, therefore for this (8) and the other reasons noted, they are acceptable.

L33 The CTS SR 3.7.5.1 requirement to perform a manual Keowee start (SR 3.7.1.11) during operation above cold shutdown was not retained. The manual start function is (17) only required to be operable during the shutdown Modes, 5 and 6 and during movement of irradiated fuel assemblies, and hence the surveillance requirements are only

applicable at this time. The accident analyses do not take credit for a manual Keowee start during operation above cold shutdown. ~~Nevertheless, the surveillance that is performed when any one of the three Oconee units is shutdown, would be valid over the annual surveillance interval, and since the Keowee units are used for commercial generation, the manual start capability is exercised many time over any consecutive 12 month interval.~~ Therefore, this change is acceptable. (17)

Section 3.4 - Less Restrictive

L1 For measured leakage > 1.0 g.p.m. and ≤ 5.0 g.p.m., CTS 3.1.6.10.a.2 and 3.1.6.10.a.3 require that the increase in the measured rate of PIV leakage since the previous test does not reduce the margin between the previous leakage and the 5.0 g.p.m. limit by ≥ 50 percent. This requirement was not retained in the ITS. The provisions removed were intended to retain a margin of safety based upon changes from past leakage rate measurements. Since past performance has not been shown to be a reliable means for predicting future performance, based on a long history of leakage determinations, the additional limitations of the CTS over those established by the STS is not warranted. Overall, leakage rates must be within acceptable limits, without regard to changes based on past performance. Therefore, this change is acceptable.

L2 CTS 3.1.6.8 permits the reactor coolant system (RCS) leak detection system sensitive to radiation to be inoperable for 48 hours. This was changed to permit the containment atmosphere radiation monitor to be inoperable for 30 days. This change was based upon recognition that at least one other form of leakage detection is available. This is consistent with the STS and is based on the fact that a loss of RCS leak detection does not exist that would warrant more restrictive ~~remedial~~ actions. Therefore, this change is acceptable. (8)

L8 A Note was added which states that the $\bar{E}$ determination is not required to be performed until 31 days after operating for a minimum of 2 effective full power days (EFPD) and 20 days of MODE 1 since the reactor was last subcritical for ≥ 48 hours. These provisions are consistent with the STS and ensures that radioactive materials are at equilibrium so that the analysis is representative and not skewed by a crud burst or similar event. Therefore, this change is acceptable.

L15 Note 2 to CTS Table 4.1-3, Item 1.c requires $\bar{E}$ determination to be started when gross gamma activity indicates > 10μCi/ml and be determined for each 10μCi/ml increase thereafter. This requirement was deleted. An $\bar{E}$ determination is required to be performed every 184 days consistent with the STS and under the conditions noted under L8 above. Therefore, this change is acceptable.

Section 3.5 - Less Restrictive

L1 & L2 When a Core Flood Tank (CFT) is inoperable, CTS 3.0 applies. It requires the unit to be placed in at least Hot Shutdown in 12 hours and Cold Shutdown within the following 24 hours. An action was added to permit the unit to continue to operate for a limited period of time (i.e., 72 hours), in the event one CFT became inoperable due to its

boron concentration not being within limits, (L1). An action was added to permit the unit to continue to operate for a limited period of time (i.e., one hour), in the event one CFT became inoperable due to a reason other than its boron concentration not being within limits, (L2). The provision of allowable outage time for the CFTs is consistent with the STS and recognizes the low probability of an accident occurring during the interval of the outage times allowed as well as the low probability of an accident of a severity that would require the safety action of the CFTs. Therefore, these changes are acceptable.

L4 In the event the Borated Water Storage Tank (BWST) is inoperable concurrent with the Concentrated Boric Acid Storage Tank (CBAST) being unavailable, CTS 3.0 applies. CTS 3.0 requires the unit to be placed in Hot Shutdown in 12 hours and in Cold Shutdown within the following 24 hours. Actions were added to provide additional time to restore the BWST to an OPERABLE status regardless of the status of the CBAST. The allowable outage time is 8 hours if the BWST is inoperable due to boron concentration or temperature, and 1 hour for any other reason, both of which are consistent with the STS. Since the CBAST is not in the success path for the safety function, it does not satisfy the criteria for inclusion as a TS requirement. The allowable outage time for the BWST is consistent with the STS, and is therefore acceptable.

Section 3.6 - Less Restrictive

L1 CTS 3.3.6 provides corrective actions when the combined leakage rate exceeds 0.5 L_a (0.1251 weight percent/day). These corrective actions were replaced with corrective actions that address a combined leakage rate in excess of 1.0 L_a (0.252 weight percent/day). The change is consistent with the STS. It is not customary for TS to establish limits and then to specify corrective actions that include a unit shutdown when a fraction of those limits are exceeded. In view of the short time allowed for corrective action, 1 hour, there is a very small overall change in the time allowed to achieve conditions under which the LCO no longer applies. Therefore, this change is acceptable.

L3 CTS 3.6.3.a.2 requires an inoperable hatch to be restored to OPERABLE status within 7 days or the reactor be in Cold Shutdown within the next 36 hours. This action was changed to allow one door of the hatch to be inoperable indefinitely provided the remaining OPERABLE door is closed and locked. Additionally, an action was added to require periodic verification that the OPERABLE air lock (hatch) door is locked closed when the other door is inoperable. The change is consistent with the STS and is appropriate on the basis that the safety function of the containment barrier is maintained by one locked closed door. Therefore, this change is acceptable.

L4 In the event the Reactor Building pressure is not within the limits of CTS 3.6.4, ITS 3.0 applies. It requires the unit to be shutdown. An action was added to allow one hour to restore the Reactor Building pressure to within limits prior to requiring a shutdown. The 1 hour Completion Time is consistent with the ACTIONS of ITS 3.6.1, which requires that containment be restored within 1 hour and provides a limited time to correct minor

problems and avoid unnecessary shutdowns. This change is consistent with the STS. Therefore, this change is acceptable. ~~In the event the Reactor Building pressure is not within the limits of CTS 3.6.4, ITS 3.0 applies. It requires the unit to be shutdown. An action was added to allow one hour to restore the Reactor Building pressure to within limits prior to requiring a shutdown.~~ (20)

Section 3.7 - Less Restrictive

L8 CTS 4.5.4.1.a requires that each train of the PRVS be run for 15 minutes at the system design flow ± 10 percent on a monthly Frequency. ITS SR 3.7.10.1 requires operating each PRVS train ≥ 15 minutes every 31 days. The elimination of the requirement that the fans operate within 10 percent of design flow during this SR is a less restrictive change. The purpose of the 31 day fan operation is to demonstrate the function of the system, which is accomplished by the 15 minutes of operation. ITS 3.7.10.3 verifies the flow capability of the PRVS trains meets requirements, although at the reduced Frequency of every 18 months on a STAGGERED TEST BASIS. Taken together, the two ITS SRs, 3.7.10.1 and 3.7.10.3 adequately demonstrate both the function and the flow capability of the system on a sufficiently frequent basis that there is confidence that the system will function when called upon, and with a sufficient capacity. Therefore, this change is acceptable.

Section 3.8 - Less Restrictive

(21)

L1 CTS 3.7.9 Required Action A.2 and B.2 require verifying the associated AC vital panelboard is energized once per 24 hours when a vital inverter is inoperable. These requirements are not retained in the ITS. This is consistent with the NUREG. The ITS SR 3.8.8.1 frequency for verifying correct breaker alignment and voltage to the vital panelboards is every seven days. The 7 day Frequency takes into account the redundant capability of the AC, DC, and AC vital electrical power distribution systems, and other indications available in the control room that alert the operator to system malfunctions. ~~If power is not available from the Vital Inverters to the a 120 VAC Vital Instrumentation panelboards, TS 3.8.8, "Power Distribution Operating," requires a panelboard to be restored to operable status within 24 hours. Restoration of the Vital Inverter to operable status is addressed in a separate specification, TS 3.8.6. Under CTS 3.7.9, the corrective actions for an inoperable inverter and its associated panelboard included restoration of power to a panelboard via the 120 VAC regulated power panelboard, KRA, and verification that the panelboard is energized once per 24 hours thereafter, with restoration of the inverter to operable status within 7 days. With the separation of inverter and panelboard requirements in the ITS, a panelboard is restored to operable status when is supplied power via the regulated power panelboard when its inverter power source is inoperable, and is no longer in a condition in which the corrective actions apply. Hence, the CTS requirement for verifying that the panelboard is energized has been removed. The condition of a de-energized panelboard which is the power distribution source for numerous instrumentation systems does not go un-noticed due to the abundance of alarms and off normal conditions created by a loss of power.~~ For these reasons, this change is acceptable.

L2 The electrical power system requirements for distribution systems address both AC and DC power distribution at various voltage levels. CTS 3.7.2 requires a unit shutdown when two or more distribution systems are inoperable. Under ITS 3.8.8, the shutdown requirements are imposed only when a loss of two or more distribution systems result in the loss of a safety function. Under the current TS provisions, shutdowns could be required due to inoperable distribution systems that only result in a loss of redundancy and not a loss of a safety function, which is contrary to the intent and regulatory requirements for limiting conditions for operation. Therefore, this change is acceptable. (8)

L3 When an emergency power source is inoperable, the ~~remedial~~ actions in the STS include a surveillance test to verify the operability of the remaining emergency power source within 24 hours. Further, this requirement is waived if it is determined that the cause of the inoperable emergency power source is not due to a common cause failure. In contrast, the Oconee requirements for the Keowee hydro units in ITS 3.8.1 is to perform the surveillance to determine operability with 1 hour, if not performed in the preceding 12 hours, and once per 12 hours thereafter unless both standby buses are energized by a Lee combustion turbine, that provides an alternate source of emergency power. Since the major safety benefit for this surveillance is to confirm the absence of common cause failures of the emergency power sources, upon discovery that one KHU is inoperable, there is a minimal impact on safety if it is not repeated at 12 hour intervals thereafter. In contrast, testing of redundant systems other than emergency power sources has long since been discarded as a STS requirement, and they have been removed from plant TS via subsequent license amendments. Therefore, this change is acceptable. (8)

Section 3.9 - Less Restrictive

L2 CTS 3.8.7 requires that both isolation valves in lines containing automatic containment isolation valves be OPERABLE, or at least one shall be closed. This requirement was relaxed to require each penetration providing direct access from the Reactor Building atmosphere to the outside atmosphere be: 1) closed by a manual valve or automatic isolation valve, blind flange, or equivalent; or 2) be capable of being closed by an OPERABLE Reactor Building Purge supply and exhaust isolation system. CTS 3.8.7 also requires containment closure capability of components in fluid systems that are ordinarily incapable of releasing radioactive material from the Reactor Building atmosphere to the outside atmosphere. This requirement was relaxed to only apply to those penetrations providing direct access from the Reactor Building atmosphere to the outside atmosphere. These changes ~~are consistent with the NRC design requirements for fuel handling accidents that do not impose the single failure criterion as applied to other design basis accidents,~~ provide an acceptable level of protection for accident mitigation, and are therefore acceptable. (22)

L4 CTS 3.8.9 precluded movement of fuel into the reactor core or other operations which may increase the reactivity of the core when fuel loading and refueling requirements are not met. This requirement was changed in the conversion to ITS such that operations involving reductions in RCS boron concentration are separately restricted such that positive reactivity additions other than loading irradiated fuel assemblies in the core is

permitted. These changes apply to the requirements for decay heat removal for which the safety function is core cooling to protect the fuel cladding as a fission product barrier. The restrictions on loading irradiated fuel assemblies is appropriate as they constitute a source of decay heat. However, reactivity considerations are not directly applicable to the safety function of decay heat removal, therefore, the changes that remove restrictions related to reactivity changes are appropriate for this application and are acceptable.

L5 The "**" footnote to CTS Table 4.1-3 requires sampling of the RCS boron concentration whenever fuel is in the reactor. The requirement to monitor boron concentration in MODE 6 was retained. However, the requirement to sample RCS boron concentration when not in Mode 6 was eliminated. During Modes other than MODE 6, shutdown margin requirements exist that include consideration of boron concentration that are adequate to assure safety without the need for a separate requirement to sample the RCS boron concentration. This change is consistent with the STS and is acceptable.

Section 3.10 - Less Restrictive

L1 CTS 4.20.3.a.1.c requires verifying that the Safe Shutdown Facility Diesel Generator starts and runs from standby conditions. A Note was added to allow the DG start from standby conditions to be preceded by a prelube period and followed by a warmup period prior to loading. The provisions for prelube and warmup are standard provisions related to diesel generators used as an emergency electrical power source as contained in the STS. These provisions provide a balance between the desire to demonstrate the operability of the specified equipment under normal standby conditions and the need to not subject the equipment to conditions that would be detrimental to their overall reliability. Therefore, these changes provide a proper balance of such considerations and are acceptable because they result in an overall increase in the reliability and availability of the diesel generators which are tested.

Section 5.0 - Less Restrictive

L3 CTS 6.1.1.4 requires the Operations Superintendent to hold, or have held, an SRO license, and the Shift Operations Manager hold an SRO license. These requirements were changed to require either the Operations Superintendent or the Shift Operations Manager to hold an SRO license. The STS requirements for manager qualifications are that either the Operations Manager or Assistant Operations Manager hold a SRO license. The provisions for the corresponding functions within the Oconee organization are held by the Operations Superintendent and Shift Operations Manager, either of which must hold a SRO license under the change requirements. Since the Commission has not established more restrictive SRO license requirements for senior management positions, this change is acceptable.

For the reasons presented above, these less restrictive requirements are acceptable because they will not affect the safe operation of the plant. The TS requirements that remain are consistent with current NRC licensing practices, operating experience, and plant accident and

(8)

transient analyses, and provide reasonable assurance that public health and safety will be protected.

D. Relocated Less Restrictive Requirements

When requirements have been shown to give little or no safety benefit, their removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of (1) generic NRC actions, (2) new staff positions that have evolved from technological advancements and operating experience, or (3) resolution of the Owners Groups comments on STS. The NRC staff reviewed generic relaxations contained in STS and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The Oconee design was also reviewed to determine if the specific design basis and licensing basis are consistent with the technical basis for the model requirements in STS, and thus provide a basis for use of ITS for Oconee. A significant number of changes to the CTS involved the removal of specific requirements and detailed information from individual specifications evaluated to be Types 1 through 4 that follow:

Type 1	Details of System Design and System Description Including Design Limits
Type 2	Descriptions of Systems Operation
Type 3	Procedural Details for TS Requirements and Related Reporting Requirements ~~Problems~~ (8)
Type 4	Performance Requirements for Indication-only Instrumentation and Alarms

The following discussions address why each of the four types of information or specific requirements are not required to be included in ITS .

Details of System Design and System Description Including Design Limits *(Type 1)*

The design of the facility is required to be described in the UFSAR by 10 CFR 50.34. In addition, the quality assurance (QA) requirements of Appendix B to 10 CFR Part 50 require that plant design be documented in controlled procedures and drawings, and maintained in accordance with an NRC-approved QA plan. In 10 CFR 50.59 controls are specified for changing the facility as described in the UFSAR, and in 10 CFR 50.54(a) criteria are specified for changing the QA plan. In ITS, the Bases also contain descriptions of system design. (ITS) (8) 5.5.15~~0~~ specifies controls for changing the Bases. Removing details of system design from the CTS is acceptable because this information will be adequately controlled in the UFSAR, QA Topical Report, COLR, IST Program ~~controlled design documents and drawings~~, or the TS Bases, as appropriate. (23)

Descriptions of Systems Operation *(Type 2)*

(8) ~~The~~ Pplans for ~~the~~ nNormal ~~and emergency~~ operation and plans for coping with emergencies ~~of the facility~~ are required to be described in the UFSAR by 10 CFR 50.34. ITS 5.4.1.a requires written procedures to be established, implemented, and maintained for applicable ~~plant~~ (24)

~~operating~~ procedures including procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Controls specified in 10 CFR 50.59 apply to changes in procedures as described in the UFSAR. In ITS, the Bases also contain descriptions of system operation. It is acceptable to remove details of system operation from the TS because this type of information will be adequately controlled in the UFSAR, plant operating procedures, and the TS Bases, as appropriate.

Procedural Details for Meeting TS Requirements & Related Reporting Requirements ~~Problems~~ *(Type 3)*

Details for performing action and surveillance requirements are more appropriately specified in the plant procedures required by ITS 5.4.1, the UFSAR, and ITS Bases. For example, control of the plant conditions appropriate to perform a surveillance test is an issue for procedures and scheduling and has previously been determined to be unnecessary as a TS restriction. As indicated in Generic Letter 91-04, allowing this procedural control is consistent with the vast majority of other SRs that do not dictate plant conditions for surveillances. Prescriptive procedural information in an action requirement is unlikely to contain all procedural considerations necessary for the plant operators to complete the actions required, and referral to plant procedures is therefore required in any event. Other changes to procedural details include those associated with limits retained in the ITS. For example, the ITS requirement may refer to programmatic requirements such as Core Operating Limits Report (COLR), included in ITS Section 5.5, which specifies the scope of the limits contained in the COLR and mandates NRC approval of the analytical methodology.

The removal of these kinds of procedural details from the CTS is acceptable because they will be adequately controlled in the UFSAR, plant procedures, Bases and COLR, as appropriate. This approach provides an effective level of regulatory control and provides for a more appropriate change control process. Similarly, removal of reporting requirements from LCOs is appropriate because ITS 5.6, 10 CFR 50.36 and 10 CFR 50.73 adequately cover the reports deemed to be necessary.

Performance Requirements for Indication-Only Instrumentation and Alarms *(Type 4)*

Indication-only instrumentation, test equipment, and alarms are usually not required to be operable to support TS operability of a system or component unless these items are included in TS as Post Accident Monitoring instrumentation. Thus, with the exception of the Post Accident Monitoring instrumentation, STS do not include operability requirements for indication-only equipment. The availability of such indication instruments, monitoring instruments, and alarms, and necessary compensatory activities if they are not available, are more appropriately specified in plant ~~operational, maintenance, and annunciator response~~ procedures required by ITS 5.4.1. Removal of requirements for indication-only instrumentation and alarms from the CTS is acceptable because they will be adequately controlled in plant procedures.

The relocated details table (Table LA ~~RL~~) lists CTS requirements and detailed information removed from individual specifications that are relocated to licensee-controlled documents in ITS. Table LA ~~RL~~ is organized by ITS section and includes: the section designation followed by the discussion of change identifier, e.g., 2.0 LA1 (ITS Section 2.0, DOC LA1); CTS reference;

a summary description of the change; the name of the document that retains the CTS requirements; the method for controlling future changes to relocated requirements; a characterization of the change; and a reference to the specific change type, as discussed above, for not including the information or specific requirements in ITS.

The NRC staff has concluded that these types of detailed information and specific requirements are not necessary to ensure the effectiveness of ITS to adequately protect the health and safety of the public. Accordingly, these requirements may be moved to one of the following licensee-controlled documents for which changes are adequately governed by a regulatory or TS requirement: (1) TS Bases controlled by ITS 5.5.154 "Technical Specifications Bases Control Program;" (2) UFSAR Chapter 16, "Select Licensee Commitments," controlled by 10 CFR 50.59; (3) the Core Operating Limits Report (COLR) controlled by ITS 5.6.5 ~~10 CFR 50.59~~; (4) Pre-Stressed Concrete Containment Tendon Surveillance Program controlled by ITS 5.5.7, "Pre-Stressed Concrete Pre-Stressed Concrete Tendon Surveillance Program Tendon Surveillance Program ;" (5) Inservice Testing Program controlled by 10 CFR 50.55a ~~and 50.59~~; and (6) the QA plans as approved by the NRC (Duke Topical Report, Duke-1-A, "Quality Assurance Program") and controlled by 10 CFR 50.54 and Part 50, Appendix B. For each of these changes, Table ~~LA RL~~ also lists the licensee-controlled documents and the TS or regulatory requirements governing changes to those documents.

To the extent that requirements and information have been relocated to licensee-controlled documents, such information and requirements are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. Further, where such information and requirements are contained in LCOs and associated requirements in the CTS, the NRC staff has concluded that they do not fall within any of the four criteria in 10 CFR 50.36 (discussed in Part II of this safety evaluation). Accordingly, existing detailed information and specific requirements, such as generally described above, may be deleted from the CTS.

E. Relocated Specifications

~~The~~ 10 CFR 50.36 ~~Final Policy Statement~~ states that LCOs and associated requirements that do not satisfy or fall within any of the four specified criteria may be relocated from existing TS (an NRC-controlled document) to appropriate licensee-controlled documents. These requirements include the LCOs, Action Statements (ACTIONS), and associated SRs. In its application, the licensee proposed relocating such specifications to the Chapter 16, "Selected Licensee Commitments" of the UFSAR. The staff has reviewed the licensee's submittals, and finds that relocation of these requirements to the UFSAR (Chapter 16) is acceptable, in that changes to these documents will be adequately controlled by 10 CFR 50.59. ~~These provisions will continue to be implemented by appropriate plant procedures: i.e., operating procedures, maintenance procedures, surveillance and testing procedures, and work control procedures.~~

The licensee, in electing to implement the specifications of STS, also proposed, in accordance with the criteria in 10 CFR 50.36 ~~the Final Policy Statement~~ to entirely remove certain TS from the CTS and place them in licensee-controlled documents noted in Table R. Table R lists all specifications and specific CTS details that are relocated, based on 10 CFR 50.36 ~~the Final Policy Statement~~ to licensee-controlled documents in ITS. Table R provides: a CTS reference;

a summary description of the requirement; the name of the document that retains the CTS requirements; and the method for controlling future changes to relocated requirements; ~~and a characterization of the discussion of change~~. The NRC staff evaluation of each relocated specification and specific CTS detail presented in Table R is provided below.

3.5.2.2.b.6/4.7.2 Control Rod Operation

The control rod drive mechanism (CRDM) power supply system design allows the capability to program any rod into any group with the exception of Group 8 using features provided in the control rod drive patch panels. This feature provides flexibility in establishing the value of rod worth between rod groups. The control rod program verification (CTS 4.7.2) requires a test to verify that each CRDM is selected and its movement verified to assure that the proper CRDM responds to a command for a change in its position. The program also requires an independent verification of power or instrumentation cables when they are disconnected and reconnected at the bulkhead or atop the reactor. If the provisions of the verification program are not met, a control rod is inoperable (CTS 3.5.2.2.b.6). These provisions are prudent post maintenance testing checks which assure that the control rods are capable of performing their intended control function following operations that could impact there normal control function. It is ~~They are~~ inherent in any post maintenance procedure to assure that adequate checks and tests are performed prior to returning equipment to service ~~to assure that a system or component has been returned to service in an operable state~~. These provisions have been relocated to the Chapter 16 of the UFSAR as a selected licensee commitments. Since the relocated requirements do not satisfy the criteria of 10 CFR 50.36 for inclusion as TS requirements, the staff finds that the relocation of these requirements is acceptable.

3.5.2.7 CRDM Patch Panel Access

The CRDM patch panels are required by CTS 3.5.2.7 to be locked at all times with limited access to be authorized by the manager or his designated alternate. As noted in the discussion of these panels above, the patch panels provide the means to alter the programing of control rods. While it is prudent to maintain access control to the CRDM patch panels, the design basis does not specifically rely on these features, locked panels, to mitigate conditions contrary to initial conditions assumed in the safety analysis. These access controls are being relocated to Chapter 16 of UFSAR. Since they do not satisfy the criteria of 10 CFR 50.36 for inclusion as TS requirements, the relocation of these provisions is acceptable.

3.5.4 Table 4.1-1, Item 34 Incore Instrumentation

The incore instrumentation consists of neutron detectors within the reactor core that provides measurements of the reactor core flux distribution. These measurements are used to verify that the axial power distribution and the quadrant tilt are with their specified limits. Functional and operational requirements for the Incore Instrumentation are addressed by CTS 3.5.4 are being relocated to Chapter 16 of the UFSAR since they do not satisfy the criteriaon for inclusion as TS requirements. This does not alter the TS axial power distribution or quadrant tilt limits specified in the ITS which must be met and inherently requires the availability of the Incore Instrumentation to provide the data to verify that those limits are monitored and met at the specified frequency. Therefore, the relocation of these provisions is acceptable.

CTS 3.3.3, CFT Instrumentation and Table 4.1-1 Instrument Surveillance Requirements.

CTS 3.3.3 requires one level instrument and one pressure instrument channel per CFT to be OPERABLE with corresponding surveillance requirements in Table 4.1-1 (Items 25a, Core Flood Tank Pressure and 25b, Core Flood Tank Level). Items 22, Pressurizer Temperature; ~~25a, Core Flood Tank Pressure; 25b, Core Flood Tank Level;~~ 27, Letdown Storage Tank Level; 31a, Boric Acid Mix Tank Level; 31b, Boric Acid Mix Tank Temperature; 32a, Concentrated Boric Acid Storage Tank Level; 32b, Concentrated Boric Acid Storage Tank Temperature; 33, Containment Temperature; 35, Emergency Plant Radiation Instruments; 36, Environmental Monitors; 38; Reactor Building Emergency Sump Level; 40, Turbine Overspeed Trip; 50, PORV and Safety Valve Position Indicators

CTS Table 4.1-1 contains the frequency and type of surveillance required for Reactor Protection System and Engineered Safety Feature Protection instruments. Surveillance requirements must be met during operational modes or under other conditions specified for LCOs. Failure to perform a Surveillance Requirement within the allowed surveillance interval constitutes noncompliance with the operability requirements for an LCO. Comparing CTS Table 4.1-1 with the LCOs in ITS section 3.3 identified ~~124~~ items that do not have a corresponding LCO. ~~These surveillance requirements do not satisfy the NRC Policy Statement on Technical Specification Screening C~~criteria of 10 CFR 50.36 for inclusion in the ITS. Additional requirements for 2 items (CFT temperature and pressure) and corresponding surveillances are relocated since they do not meet 50.36 criteria. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59.

CTS 3.1.2.5 Steam Generator Pressure/Temperature Limitations

CTS 3.1.2.5 requires that the secondary side of the steam generator shall not be pressurized above 237 psig if the temperature of the vessel shell is below 110°F. The limitations on steam generator pressure and temperature provide protection against non-ductile failure of the secondary side (shell) of the steam generator. These limits are calculated using the ASME Code for Class A components and are considered to be conservative. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59.

CTS 3.1.2.6 Pressurizer Heatup and Cooldown Limits and Spray Valve Differential Temperature Limit

CTS 3.1.2.6 requires that the pressurizer heatup and cooldown rates shall not exceed 100 degrees F per hour. In addition, the pressurizer spray is not to be used if the temperature difference between the pressurizer and the spray fluid is greater than 410 degrees F. The heatup and cooldown rates and differential temperature limitation are placed on the pressurizer to prevent non-ductile failure and ensure compatibility of operation with the fatigue analysis. The limits meet the requirements given in ASME Section III, Appendix G. These limitations are

consistent with structural analysis results and are considered to be conservative. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS 3.1.6.9 RCS Returnable Leakage Limits

CTS 3.1.6.9 specifies that the loss of reactor coolant through reactor coolant pump seals and system valves to connecting systems which vent to the gas vent header and from which coolant can be returned to the reactor coolant system (returnable reactor coolant system leakage) shall not be considered as reactor coolant system leakage. However, losses of this type, when added to leakage, shall not exceed 30 gpm. The upper limit of 30 gpm is based on the contingency of a complete loss of station power. A 30 gpm loss of water in conjunction with a complete loss of station power and subsequent cooldown of the reactor coolant system by the turbine bypass system (set at 1,040 psia) and steam driven emergency feedwater pump would require more than 60 minutes to empty the pressurizer from the combined effect of system leakage and contraction. This will be ample time to restore electrical power to the station and makeup flow to the reactor coolant system. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS 3.2 High Pressure and Chemical Addition Systems and Table 4.1-3, Item 6, Sampling Requirements for the Concentrated Boric Acid Tank

CTS 3.2 contains requirements associated with the High Pressure Injection (HPI) pumps and the Chemical Addition Systems. Table 4.1-3, Item 6, contains the periodic sampling requirements of the Concentrated Boric Acid Storage Tank (CBAST). These components ensure negative reactivity control is available for normal operation (normal makeup and chemical shim reactivity control). Under certain circumstances, emergency boration may be necessary. The primary method for emergency boration is HPI using borated water from the Borated Water Storage Tank (BWST). HPI with boron addition from the CBAST is an alternative method for emergency boration of the RCS in the event of stuck control rods following a reactor trip. The requirements for the HPI capability with regard to the BWST are contained in CTS specification 3.3. The reactivity control capability provided by the combination of HPI and CBAST is not assumed to mitigate any design basis accident or transient since the source of borated water that is assumed in the safety analysis is the BWST. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS 3.4.6 Independence of Emergency Feedwater Controls and Integrated Control System

CTS 3.4.6 requires that the controls of the emergency feedwater (EFW) system shall be independent of the Integrated Control System (ICS). The independence of the EFW controls from ICS is a requirement of the plant design and is not within the control of the plant operators. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS Table 4.1-2, Item 9 Spent Fuel Pool Cooling System Functional

CTS Table 4.1-2, Item 9, lists a surveillance requirement for which there is no corresponding LCO in CTS section 3. The spent fuel pool cooling system provides decay heat removal for the spent fuel stored in the spent fuel pool. Other system functions are to maintain spent fuel pool water inventory, water clarity, and water chemistry within acceptable levels. These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS Table 4.1-2, Item 8 High Pressure Service Water Pumps and Power Supplies

CTS Table 4.1-2, Item 8, contains a surveillance requirement for which there is no corresponding LCO in CTS section 3. The High Pressure Service Water (HPSW) Pumps are used primarily for fire protection throughout the Oconee station. In the event of a loss of the normal Low Pressure Service Water (LPSW) supply, the HPSW system automatically supplies cooling water to the HPI pump motor coolers. For loss of AC power, HPSW via the elevated water storage tank automatically supplies cooling water to the turbine driven emergency feedwater pump and its associated oil cooler, and maintains condenser circulating water (CCW) pump bearing cooling water and cooling water for the CCW pump motors. This surveillance requirement does not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ ~~C~~criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of this surveillance requirement to Chapter 16 of the UFSAR is acceptable, in that changes to the requirement will be adequately controlled by 10 CFR 50.59. (8)

CTS 3.12 Reactor Building Polar Crane and Auxiliary Hoist

CTS 3.12 contains the requirements for the Reactor Building Polar Crane and Auxiliary Hoist. The specification applies to the use of the reactor building polar crane over the steam generator compartments and the fuel transfer canal and the auxiliary hoist over the fuel transfer canal. These restrictions preclude the dropping of materials or equipment into the reactor vessel and possibly damaging the fuel to the extent that an escape of fission products would result.

The fuel transfer canal is delineated by readily visible markers at an elevation above which the reactor building polar crane does not normally handle loads. Restriction in the use of the

reactor building polar crane over the steam generator compartments is administratively controlled to preclude damage to the steam generators and the RCS system.

These requirements do not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of these requirements to Chapter 16 of the UFSAR is acceptable, in that changes to these requirements will be adequately controlled by 10 CFR 50.59. (8)

CTS 4.16 Radioactive Material Sources

CTS 4.16 imposes a Surveillance Requirement which implies an LCO exists. However, there is no corresponding LCO for the Radioactive Material Sources in CTS section 3. The CTS specification requires leakage testing for sealed sources containing radioactive material in non-gaseous form, other than tritium with a half life greater than 30 days. This specification ensures that leakage from byproduct, source and special nuclear material seal sources do not exceed allowable limits. Sealed sources are exempt when the source contains $\leq$ 100 micro Curies of beta and/or gamma emitting material or $\leq$ 10 micro Curies of alpha emitting material. The requirement does not satisfy the ~~NRC Policy Statement on Technical Specification Screening~~ criteria of 10 CFR 50.36 for inclusion in the ITS. The staff has reviewed the licensee's submittal and finds that relocation of this requirement to Chapter 16 of the UFSAR is acceptable, in that changes to this requirement will be adequately controlled by 10 CFR 50.59. (8)

3.8.1 Radiation Monitoring Instrumentation

Radiation monitoring instrumentation used during fuel loading and refueling is address by CTS 3.8.1 which specifies that specific installed and portable instrumentation shall be used to monitor specific areas to protect individuals involved in refueling operations. Operability of these monitors is not assumed in the safety analysis, nor due they serve any accident mitigation purposes. ~~General requirements for the protection of personnel from the harmful effects of ionizing radiation are established by the regulations, not TS, for all activities conducted at nuclear facilities.~~ The details of these requirements are being relocated to Chapter 16 of the UFSAR. Since these requirements to not satisfy the criteria for inclusion as TS requirements, the relocation of the requirements is acceptable. (30) (8)

3.8.5 Communications

CTS 3.8.5 stipulates that direct communications between the control room and the refueling personnel in the reactor building shall exist whenever changes in core geometry are taking place. These requirements are being relocated to Chapter 16 of the UFSAR. Since this communication is not relied upon in the safety analysis for the mitigation any accident nor the maintenance of conditions assumed in the safety analysis, it does not satisfy the criteria for including in TS. Therefore, the relocation of this requirement is acceptable. (8)

3.8.8 Fuel Assembly Handling

Restrictions on handling irradiated fuel assemblies are stated in CTS 3.8.8 which establishes a minimum of 10 feet separation of assembles in the fuel transfer canal. Also, if fuel assemblies are being handled with the Auxiliary Hoist, no other fuel element may be in the fuel transfer canal. These requirements are being relocated to Chapter 16 of the UFSAR. The design of the fuel handling capabilities for the transfer canal precludes fuel elements being within 10 feet of each other. Hence, the restrictions on operations are for considerations that would be an abnormal use of the equipment for handling irradiated fuel assemblies. Since these provisions do not satisfy the criteria for inclusion in TS, the relocation of these provisions is acceptable.

3.8.14 Handling Heavy Loads Over Spend Fuel Pool

The restriction in CTS 3.8.14 on transporting suspended loads of more than 3000 lb over spent fuel in either spend fuel pool were established to address limits on construction activities associated with replacing fuel storage racks in 1979. This construction activity was completed and a temporary crane which was used to transport new storage racks has been removed. The load limit established is greater than a fuel assembly and control rod and would not restrict the transport of those items in this area. The 100 ton crane used for cask handling operates only over one end of the spend fuel pool. The crane bridge and trolley hard stops prevent travel over any area where spend fuel is stored in the fuel racks. The restriction on heavy loads is being relocated to Chapter 16 of the UFSAR and is not necessary to preclude operations assumed in the accident analysis. Therefore, it does not satisfy the criteria for inclusion in TS and its relocation is acceptable.

Summary

The relocated CTS discussed above are not required to be in the TS under the 10 CFR 50.36 criteria. The relocated CTS are not needed to obviate the possibility that an abnormal situation or event will give rise to an immediate threat to the public health and safety. In addition, the NRC staff finds that sufficient regulatory controls exist under the regulations cited above to maintain the effect of the provisions in these relocated specifications. The NRC staff has concluded that appropriate controls have been established for all of the current specifications, information, and requirements that are being moved to licensee-controlled documents. This is the subject of a license condition established herewith. ~~Until incorporated in the UFSAR and procedures, changes to these specifications, information, and requirements will be controlled in accordance with the applicable current procedures that control these documents. Following implementation, the NRC will audit the relocated provisions to ensure that an appropriate level of control has been achieved.~~ The NRC staff has concluded that, in accordance with 10 CFR 50.36 ~~the Final Policy Statement~~, sufficient regulatory controls exist under the regulations, particularly 10 CFR 50.59, to adequately ensure that the relocation of CTS as discussed above will not adversely impact safe operations at Oconee. Accordingly, these specifications, information, and requirements, as described in detail in this Safety Evaluation, may be relocated from CTS and placed in the UFSAR as specified in the licensee's submittal.

F. Control of Specifications, Requirements, and Information Removed from the CTS

The facility and procedures described in the UFSAR and incorporated into the UFSAR by reference can only be revised in accordance with the provisions of 10 CFR 50.59, which

ensures records are maintained and establishes appropriate control over requirements removed from CTS and over future changes to the requirements. Other licensee-controlled documents contain provisions for making changes consistent with other applicable regulatory requirements: for example, the Offsite Dose Calculation Manual (ODCM) can be changed in accordance with 10 CFR 50.59, the emergency plan implementing procedures (EPIPs) can be changed in accordance with 10 CFR 50.54(q); and the administrative instructions that implement the Quality Assurance Program (QAP) can be changed in accordance with 10 CFR 50.54(a) and 10 CFR Part 50, Appendix B. ~~Temporary procedure changes are also controlled by 10 CFR 50.54(a).~~ The documentation of these changes will be maintained by the licensee in accordance with the record retention requirements specified in the licensee's QAP for Oconee and such applicable regulations as 10 CFR 50.59.

32

The licensee committed in the license amendment request of October 28, 1997, to place specific ~~that~~ CTS requirements ~~designated for placement~~ in ~~the~~ UFSAR Chapter 16 ~~will be included in the next required update in accordance with the provisions of 10 CFR 50.71(e).~~ This is the subject of a license condition established herewith. ~~The licensee will maintain an auditable record of, and an implementation schedule for, the procedure changes associated with the development of ITS. The licensee will maintain the documentation of these changes in accordance with the record retention requirements in the QAP.~~

33

34

G. Evaluation of Beyond Scope Items

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1. ~~Description :~~

~~A proposed change to the note for ITS Surveillance Requirement (SR) 3.1.4.3 would provide the additional flexibility for testing control rod drop times with reactor coolant flow conditions other than full flow, but with at least one reactor coolant pump (RCP) pump running. This would ensure that the testing is bounding by restricting operation of the unit to the RCP combination used during control rod drop testing and represents adoption of the NUREG rather than the CTS. These changes are less restrictive.~~

~~Evaluation:~~

~~This beyond scope item is acceptable since a reduction in RCS flow improves rod drop times.~~

~~2.~~ Description:

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Certain NUREG and CTS Sections 3.1.3.5, 3.5.2.4.a, 3.5.2.5.b, 3.5.2.5.c, and 3.5.2.6, specify that they are applicable "except during Mode 1 physics testing." The exception would not be included in the ITS and, therefore, the Mode 1 requirement would be applicable during the tests. The proposed change is more conservative since no exceptions would be allowed for physics tests conducted in Mode 1. These changes are more restrictive.

Evaluation:

This beyond scope item is acceptable because Oconee currently does not take these exceptions in Mode 1 and because it is more conservative not to allow exceptions during Mode 1 testing.

~~3. Description:~~

~~CTS 3.1.3.2 requires reactor coolant temperature to be greater than the criticality values of specified heatup limitation curves. This requirement would not be retained in the ITS. ITS 3.1.8 Limiting Condition for Operation (LCO) Part e, would be added to provide a restriction for loop average temperature to be greater than or equal to 520°F when performing physics tests in Mode 2. ITS LCO 3.1.8 would permit suspending the requirements of ITS LCO 3.4.2, "RCS Minimum Temperature for Criticality," during physics tests initiated in Mode 2. Associated Actions and an SR would be added to provide an appropriate required action when outside the limit and to verify operation within the limit periodically. These changes are more restrictive.~~

~~Evaluation:~~

~~Although NUREG-1430 allows an exception to the minimum temperature for criticality during Mode 2 physics tests without including a restriction on lowest RCS loop average temperature, the proposed change permits loop average temperatures to be reduced slightly while still providing an appropriate restriction on the minimum limit for criticality. The added restriction is consistent with the applicable safety analysis which takes credit for maintaining the RCS temperature at 520°F, and therefore, the beyond scope item is acceptable.~~

24. Description:

CTS Table 3.5.1-1 presently requires that the operator place the plant in hot shutdown (ITS equivalent of Mode 3) within 12 hours when the minimum channels Operable requirement is not met. The proposed change to the ITS would provide an equivalent requirement and add a requirement to open all control rod drive (CRD) trip breakers within 12 hours. ITS 3.3.1 Action C, ITS 3.3.2 Action B, ITS 3.3.3 Action B, and ITS 3.3.4 Action D would be added to require that the unit be in Mode 3 in 12 hours with all CRD trip breakers open. ITS 3.3.3 Action B and ITS 3.3.4 Action D also require ~~or~~ that power be removed from all CRD trip breakers when the required action and associated completion time is not met in Mode 1, 2, or 3. For ITS 3.3.3, Action B would also apply when two or more reactor trip modules are inoperable in Mode 1, 2, or 3. The CTS presently requires entry into TS 3.0, which requires that the reactor be in hot shutdown (equivalent to ITS Mode 3) in 12 hours. These changes are more restrictive.

Evaluation:

This is consistent with the current Oconee licensing basis that permits 12 hours to place a unit in hot shutdown (Mode 3) and the beyond scope item is, therefore, acceptable.

35. Description:

Note c would be added to ITS Table 3.3.8-1, Post Accident Monitoring Instrumentation, and referenced to Item No. 8, Containment Isolation Valve Position, to specify that position indication requirements apply only to the Containment Isolation Valves that are electrically controlled.

Evaluation:

The existing design (FSAR Section 7.5.2.20) states that all electrically controlled containment isolation valves are provided with control switches on the main control boards. Actual valve position is provided by Quality Assurance (QA) Condition 1 limit switches on the valves that operate both Closed-Not Closed and Open-Not Open indicating lights. These valves and their control switch indicating lights are powered by safety grade emergency buses. Additional indication is provided on the computer. Environmental qualification of the limit switches is described in the in the Oconee IEB-79-01B submittal. The instrumentation is seismically qualified in accordance with the Oconee UFSAR Section 3.10 and the Oconee Seismic Design Criteria (OSDC-0193.01-00-00001). The staff considers this acceptable since it meets the guidance of Regulatory Guide 1.97 for qualification of post accident monitoring instrumentation. Therefore, the staff concludes that the design of the Post Accident Monitoring Instrumentation for position indication of electrically controlled containment isolation valves meets the guidance of Regulatory Guide 1.97 and the beyond scope item is, therefore, acceptable.

8 46. Description:

The applicability would be expanded to require wide range instruments of CTS 8 Table 3.5.1-1 to be operable in Mode 2, plus Modes 3, 4, and 5, with any CRD trip breaker in the closed position and the CRD system capable of rod withdrawal. In addition, 8 a CTS Note ~~would~~ defines the upper limit of the applicable Modes for the required wide range instrument channels as being 10 percent indicated neutron power. These changes are more restrictive.

Evaluation:

The addition of Modes 3, 4, and 5 maintains consistency with the Oconee TS that define the upper limit of the applicable modes for the required wide range instrument channel as being 10 percent indicated neutron power. Without the addition of these modes, a wide range channel would be required at all times in Mode 1, which is inconsistent with the RPS design requirement to provide indication of neutron power during low power levels (Mode 2). Since the power range instruments provide the required power level indication in Mode 1, the beyond scope item is acceptable.

8 57. Description:

Required Action B.2.2 of ITS 3.3.11, 12 and 13, would be added to provide the option of closing the main feedwater control valves (MFCVs) and startup feedwater control valves (SFCVs) in lieu of reducing main steam header pressure to less than 700 psig [pounds

per square inch gauge]. Applicability would be changed to Modes 1 and 2, plus Mode 3 when the main steam header pressure is greater than 700 psig except when all MFCVs and SFCVs are closed. These changes are less restrictive.

Evaluation:

The exception is consistent with comparable STS Table 3.3.11-1, Note, and it is acceptable since the MFCVs and SFCVs are already performing their safety function when they are closed during events while emergency feedwater is required. Required Action B.2.2 of ITS 3.3.11, 12 and 13 is added to provide the option of closing the MFCVs and SFCVs in lieu of reducing main steam header pressure to less than 700 psig. This option is consistent with the applicability and the beyond scope item is acceptable.

68. Description:

The applicability of ITS 3.3.14 would be expanded to include Mode 4 when the steam generator is relied upon for heat removal, which then would be consistent with the applicability of ITS LCO 3.7.5 for the emergency feedwater (EFW) system. ~~ITS Specifications 3.3.14 and 3.3.15 would be added to address EFW system initiation circuitry and main steamline break and main feedwater isolation instrumentation separately.~~ The NUREG specification combines the EFW system initiation, main steamline isolation, and main feedwater isolation functions into one specification. The specification titles, LCOs, actions, and SRs would be modified to reflect Oconee-specific terminology and design requirements. Where appropriate, ITS-required actions would be based on similar NUREG-required actions. ~~EFW pump initiation circuitry operable requirement would be changed from 250°F to ≥246°F.~~ Requiring the EFW pump initiation circuitry to be OPERABLE in MODE 4 when relied upon for decay heat removal is a more restrictive requirement with no comparable NUREG requirement. ~~These changes are more restrictive.~~

Evaluation:

This proposed ITS is more restrictive than CTS and is consistent with STS 3.7.5 for the requirement of EFW system. This beyond scope item is acceptable.

79. Description:

ITS 3.3.15 Action A.1 would be added to allow 1 hour to declare the turbine stop valves (TSVs) inoperable prior to requiring that the unit shut down when one or more TSV closure channels is inoperable. ~~ITS Specifications 3.3.14 and 3.3.15 would be added to address EFW system initiation circuitry and main steamline break and main feedwater isolation instrumentation separately.~~ The NUREG specification combines the EFW system initiation, main steamline isolation, and main feedwater isolation functions into one specification. The specification titles, LCOs, actions, and SRs would be modified to reflect Oconee-specific terminology and design requirements. Where appropriate, ITS-required actions would be based on similar NUREG-required actions. Action A added to

require declaring the TSVs inoperable when one or more TSV closure channels is inoperable, which although not directly comparable to NUREG required actions, is comparable to similar NUREG required actions. ~~(CTS: None, ITS: 3.3.15 RA A.1)~~

Evaluation:

This Required Action is consistent with STS 3.3.7 , Required Action A.2 and is more restrictive than CTS relative to the required shutdown time. This beyond scope item is acceptable.

~~8~~10. Description:

CTS 3.8.10 and 4.4.4.5 frequency would be changed from "...immediately prior to refueling operation" to "Once each refueling outage prior to CORE ALTERATIONS or movement of irradiated fuel assemblies within containment" in ITS SR 3.3.16.2 for testing frequency of the radiation monitor associated with the purge system valve isolation and ITS SR 3.9.3.2 for testing isolation function of the reactor building purge supply and exhaust valves. These changes are less restrictive.

Evaluation:

The licensee indicated that the proposed change permitting the specified testing to be conducted once each refueling outage prior to core alterations or movement of irradiated fuel assemblies inside the containment in lieu of immediately prior to refueling operations represents a reasonable relaxation of the CTS surveillance frequency. This continues to ensure that this function is verified within a reasonable interval prior to handling irradiated~~ion~~ fuel assemblies ~~handling~~ within containment. This is more restrictive than the NUREG testing frequency of 92 days. It is also consistent with ITS SR 3.9.3.2, which verifies that the reactor building purge supply and exhaust valves actuates to the correct position on an actual or simulated actuation signal once each refueling outage prior to beginning core alterations or movement of irradiated fuel assemblies within containment. This is appropriate since the safety function of the radiation monitor is to close ~~isolate~~ the purge valves.

Based on our review of this information, the staff finds the proposed change acceptable since it continues to ensure that the testing of radiation monitor valve associated with the purge system is verified each refueling outage prior to irradiated fuel assembly handling and is consistent with ITS SR ~~3.9.3.3~~ 3.9.3.2 for testing of the purge supply and exhaust valves. The proposed change does not involve a significant reduction in a margin of safety.

CTS 3.8.10 requires testing the isolation function of the reactor building purge supply and exhaust valves immediately prior to refueling operations. CTS 4.4.4.5 requires verifying purge isolation valves close per CTS 3.8.10. ITS 3.9.3.2 requires this testing be performed once each refueling outage prior to core alterations or movement of irradiated fuel assemblies inside containment.

The licensee indicated that the frequency of 18 months for NUREG SR 3.9.3.2 is modified to partially retain the current licensing bases (CLB). The NUREG frequency of 18 months is considered to be inappropriate for Oconee since the purge valves remain closed ~~isolated~~ for extended periods of time during unit operation. ITS SR 3.9.3.2 requires verification that each reactor building purge supply and exhaust valve actuates to the correct position on an actual or simulated actuation signal once each refueling outage prior to core alterations or movement of irradiated fuel assemblies inside containment. The proposed change represents a reasonable relaxation of the current requirement of " immediately prior to..." surveillance frequency and remains within the NUREG specified frequency of 18 months.

Based on above review, the staff finds the proposed change acceptable since it continues to ensure that this function is verified each refueling outage prior to core alterations or movement of irradiated fuel assemblies within containment and represents a reasonable relaxation of the current requirement of immediately prior to beginning refueling operations. The proposed change does not involve a significant reduction in a margin of safety.

~~11. Description:~~

~~CTS 3.7.6 and 3.7.7 both require an inoperable voltage sensing relay to be restored within 72 hours. ITS 3.3.19 Required Action A.1 and 3.3.20 Required Action A.1 would be incorporated to require that the inoperable channel be placed in trip within 72 hours. This change allows operation to continue indefinitely when the channel is placed in trip and continues to allow 72 hours to restore an inoperable channel that cannot be placed in trip. These changes are less restrictive.~~

~~Evaluation:~~

~~Identical changes to the ITS 3.3.17 through 3.3.21 proposed changes have been evaluated and determined to be acceptable in the safety evaluation prepared for CTS Amendment Nos. 232, 232, and 231 for Oconee Units 1, 2, and 3 respectively. The amendments were issued on September 3, 1998. ITS 3.3.22 complies with the NUREG. Therefore, these proposed changes are acceptable.~~

~~912.~~ Description:

ITS LCO 3.4.1, Departure from Nucleate Boiling Ratio (DNBR) Limits, are specified in the core operating limits report rather than in the LCO and SRs since they are subject to change with fuel cycle designs. The ITS LCO 3.4.1 actions would require restoring DNBR parameters to within limits within 2 hours or exiting the applicability for the specification within 12 additional hours. ITS SR 3.4.1.1, SR 3.4.1.2, and SR 3.4.1.3 would require verification that each DNBR parameter is within the limit at a 12-hour frequency. ITS SR 3.4.1.4 would require verification by measurement that total RCS flow is within limit at an 18-month frequency. Specification 3.4.1 would ensure that limits on RCS pressure, temperature, and flow rate are met to ensure that the core

operates within the limits assumed for the plant safety analyses. These changes are more restrictive.

Evaluation:

~~In general the staff does not allow RCS flow rate to be move to the COLR since a change in flow rate implies a physical change to the plant and must be reviewed by the staff. However,~~ The proposed ITS 3.4.1 is more restrictive than the CTS since there is no current requirements comparable to STS 3.4.1. Therefore, the proposed ITS 3.4.1 beyond scope item is acceptable.

~~1013~~ Description:

The NUREG allowed time to complete the surveillance requirement after addition to core flood tank (CFT) of 6 hours would be changed to 12 hours. ITS SR 3.5.1.4 would require CFT boron concentration be sampled every 31 days or once within 12 hours after each solution volume increase greater than or equal to 80 gallons that is not the result of addition from a borated water source that meets CFT boron concentration requirements. Since the CTS does not specify the time limit following addition, the proposed ITS change is a more restrictive limit.

Evaluation:

The need for this extra time from 6 hours to 12 hours is that Oconee design does not provide a method of mixing after CFT makeup and relies on convection mixing. The proposed ITS is more restrictive than the CTS, which does not include this sampling requirement. Therefore, the proposed ITS beyond scope item is acceptable.

~~1114.~~ Description:

CTS Table 4.1-3 requires that CFT boron concentration be sampled monthly and after each makeup. ITS Surveillance Requirement 3.5.1.4 requires it be sampled every 31 days and once within 12 hours after each solution increase ≥ 80 gallons that is not the result of addition from a borated water source that meets CFT boron concentration requirements. Therefore, the ITS frequency is less restrictive than current requirements because sampling will be required once within 12 hours following the volume increase and source requirement. Also, the source of makeup would be changed from the "borated water storage tank" to "a source that meets CFT boron concentration requirements."

Evaluation:

The normal source of makeup water is the boric acid mixing pump, not the borated water storage tank. The source of inventory makeup is sampled to demonstrate that it contains an acceptable boron concentration prior to its discharge to the CFTs. The requirement to sample other makeup water sources will continue in accordance with the

intent of the ITS. Thus, Surveillance Requirement 3.5.1.4 is modified to reflect specific system characteristics and the proposed ITS beyond scope item is acceptable.

~~1215.~~ Description:

ITS 3.5.3 LCO Note 3 would be added to explicitly require that the low pressure injection (LPI) discharge header crossover valves be operable and capable of being opened manually when in Modes 1, 2, and 3. ITS 3.5.3 Action B would require that the LPI discharge header crossover valves be restored to operable status within 72 hours of being discovered incapable of being manually opened when in Modes 1, 2, and 3. ~~ITS 3.5.3 Action D would require LCO 3.0.3 be entered immediately when one LPI train is inoperable in Modes 1, 2, and 3 concurrent with discovery that the LPI discharge header crossover valves are incapable of being opened manually in Modes 1, 2, and 3.~~ These changes are more restrictive.

Evaluation:

The current technical specifications (CTS) at Oconee does not include an explicit requirement for manual operability of the LPI discharge header crossover valves. The proposed ITS 3.5.3 requires the manual operability of the LPI discharge crossover valves during Modes 1, 2 and 3. Also, it requires that the LPI discharge header crossover valves to be restored to operable status within 72 hours of being discovered manually inoperable in Modes 1, 2 and 3. This proposed addition to TS will support the current safety analysis assumption in the event of a core flood line break concurrent with a single failure of the unaffected LPI train. The LPI discharge header crossover valves must be capable of being manually opened for necessary accident mitigation. We find this proposed addition to Oconee TS acceptable.

~~1316.~~ Description:

ITS 3.5.3 would require the LPI system to be operable in Modes 1, 2, 3, and 4. LCO Note 1 would be added to specify that only one LPI train is required to be operable in Mode 4. LCO Note 2 would be added to allow an LPI train to be considered operable during alignment, when aligned, or when operating if capable of being manually realigned to the LPI mode of operation. Action D E would be added to require action be initiated immediately to restore the required LPI train to operable status and to require the reactor to be placed in Mode 5 within 24 hours when the required LPI train cannot be restored to OPERABLE status (provided a decay heat removal loop is available). These changes are more restrictive.

Evaluation:

~~The restrictions in the proposed is consistent with that in its current TS.~~ A note is added in the proposed ITS for not entering Mode 5 when a DHR loop is not operable. This action is appropriate since in this condition the unit is not prepared to continue cooldown using the LPI pumps and LPI heat exchangers. The proposed ITS 3.5.3 in the areas of LPI system are acceptable.

1417 Description:

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SR 3.9.4.1 would require verification every 12 hours that one decay heat removal loop is in operation. These changes are more restrictive.

Evaluation:

The proposed beyond scope item is acceptable since adequate decay heat removal can be monitored by the operator and adjustments made based on the trending indications available in the control room. In addition, the proposed ITS provision is more restrictive than the CTS, which does not contain comparable requirements.

1518 Description:

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The proposed change would specify actions to be taken for Borated Water Storage Tank (BWST) level, boron concentration, or temperature not being within specifications. Proposed ITS 3.5.4 Required Action C.1 would allow 12 hours to reach Mode 3 (i.e., an additional 6 hours over what is currently allowed by CTS 3.2.2) under such conditions. These changes are less restrictive.

Evaluation:

The BWOG STS address the borated water storage tank (BWST) differently than the Oconee CTS. The Oconee CTS address the condition where the BWST is inoperable and the concentrated boric acid storage tank (CBAST) is operable. The BWOG STS 3.5.4 address two conditions, 1) when the BWST is inoperable for temperature or boron concentration reasons and 2) when the BWST is inoperable for reasons other than temperature or boron concentration. The latter condition allows only one hour to prepare to shutdown or correct the problem and requires shutdown in six hours because of the importance of the BWST in mitigating a number of design basis transients. The BWOG STS 3.0.3 also applies the same length of time, one hour to prepare for shutdown or correct the problem and six hours to shut the plant down, when an LCO is not met and no other TS action is provided.

The apparent inconsistency can be traced to the Oconee CTS 3.2 which requires that if the BWST is inoperable and the CBAST is operable, the BWST be returned to operable status within one hour or the reactor be put in a hot shutdown condition in 6 hours. However, CTS LCO 3.0 requires that in the event that a limiting condition for operation cannot be satisfied because of circumstances in excess of those addressed in the specification the affected unit should be placed in at least a hot shutdown condition within the next 12 hours. As a result, CTS 3.2 covers the circumstance where BWST is inoperable and the CBAST is operable and a six hour shutdown specification applies. However, the licensee points out that if both the BWST and the CBAST are inoperable the shutdown time is longer because CTS 3.2 no longer applies. In this case, CTS 3.0 would apply and shutdown within 12 hours would be required. This condition where

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the CTS requires a faster shutdown if more equipment is available is not appropriate ~~adequate~~

To address the conflict, the licensee has proposed the same shutdown time limit to the BWST (12 hours) as is required by the more general TS 3.0.3 condition. As a result, with this amendment the licensee is permitted an additional six hours, compared with the CTS, when the BWST is inoperable and the CBAST is operable. The other conditions associated with this issue are fundamentally the same as the CTS or the BWOG STS.

The time allowed to shut the unit down is intended to allow the plant to conduct a controlled and orderly shutdown that will not challenge plant equipment, particularly when the available plant equipment is reduced (i.e., in a TS 3.0.3 or a TS 3.5.4 condition). The BWOG STS reiterate this in the basis section by stating that:

The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

Shutting the plant down in a controlled and orderly manner without challenging safety systems is more important than shutting the reactor down in a shorter period of time. As a result, because the Oconee licensing basis generally requires a 12 hour shutdown (including conditions where the other specifications do not apply), it is more appropriate to apply the 12 hour shutdown requirement consistently to assure the unit is shutdown safety. This, in concept, is consistent the BWOG STS because both STS 3.0.3 and STS 3.5.4 BORATED WATER STORAGE TANK require the same shutdown time. Although both BWOG STS allow a shorter time to shutdown, they are consistent.

In summary, the main objective when there are problems with the BWST is to shut the plant down safely and not challenging safety systems which the proposed ITS require. As a result of its review, he staff has determined that the ITS and the associated TS changes acceptable because it is important to maintain consistency among the shutdown TSs and assure that the plant is shutdown safely without challenging safety systems.

~~1619~~ Description:

Added a Specification for Main Feeder Bus Monitor Panel Instrumentation per previous commmitment. Added a reporting requirement specified in 3.3.23 Required Action D.1 ~~Main feeder bus monitoring panel and increase of the allowed outage time.~~

Evaluation:

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ITS Specification 3.3.23, "Main Feeder Bus Monitoring Panel (MFBMP)," is added to require three MFBMP undervoltage sensing relays per bus and two MFBMP undervoltage actuation logic channels to be OPERABLE in MODES 1, 2, 3, or 4 along with appropriate ACTIONS and Surveillance Requirements. No credit is taken for this system in any accident or transient analyses. Although the MFBMP does not meet any 50.36 criteria, a Specification has been added since the MFBMP provides defense-in-depth for any scenario which results in loss of power to the main feeder buses. ITS 5.6.6 reporting requirements are added to address the new requirement added by Condition D of ITS 3.3.23. The addition of these requirements are an acceptable restriction on plant operation. ~~????~~

17 ~~20.~~ Description:

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Added SR to perform battery performance discharge testing. Added Battery Discharge Testing Program. ~~Addition of battery performance discharge test surveillance to ITS Section 3.8.~~

Evaluation:

ITS SR 3.8.3.6 is added to require verifying battery capacity is in accordance with the Battery Discharge Testing Program. This SR is intended to determine overall battery degradation due to age and usage. The addition of this requirement is an acceptable restriction on plant operation and is consistent with current administrative procedures. The proposed change is generally consistent with NUREG SR 3.8.4.8. ITS 5.5.20, "Battery Discharge Testing Program," is added. This program is intended to determine overall battery degradation due to age and usage. The addition of this requirement is an acceptable restriction on plant operation and is consistent with current administrative procedures. The proposed change is consistent with NUREG SR 3.8.4.8.~~???~~

18. Description

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Removed allowance to shut down unit under 3.8.1 ACTION B when a Required Action and associated Completion Time of Condition A is not met.

Evaluation

This is slightly less restrictive since it allows an additional 1 hour to reach MODE 5. However, overall it is considered more restrictive since it requires initiation of a shutdown in one hour and the intermediate step to MODE 4 in 18 hours. This more restrictive requirement is an acceptable restriction on unit operation.

19. Description

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In ITS Section 3.8.1, the licensee added a note to the limiting condition of operation (LCO) for Section 3.8.1. This note indicates that the minimum Keowee Reservoir level must be $\geq$ 775 feet.

Evaluation

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The addition of this explicit requirement is more prescriptive than CTS and is therefore considered more restrictive. The addition is an acceptable restriction on plant operation and is consistent with the Bases.

H. Evaluation of Beyond Scope Bracketed Items

1. Description:

BWST minimum temperature changed from 40°F to 45°F. CTS value is 50°F. BWST maximum temp is changed from 100°F to 115°F. There is no CTS maximum value. (CTS: 3.3.4.b, ITS: SR 3.5.4.1)

Evaluation:

The proposed analytical value temperature limit is acceptable since it is consistent with the current description in Section B 3.5.4 of NUREG 1430, Revision 1.

2. Description:

Change ESPS actuation setpoint for HPI from ≥ 1500 psig RCS pressure to ≥ 1590 psig RCS pressure to establish more conservative operating limitation on the plant with respect to actuation of ES protective features.

Evaluation:

The proposed change raise the HPI actuation setpoint is acceptable since it is more conservative and incorporates the appropriate instrument uncertainty values rather than just the analytical limit. In addition, it is the value currently reflected in procedures.

~~I. Evaluation of Other TS Changes~~

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~~1. Electrical System Technical Specification Changes~~

~~By letter dated September 4, 1998, the staff approved Amendment Numbers 232, 232, and 231, which consisted of a complete revision of the Oconee CTS Section 3.7, Auxiliary Electrical Systems. The amendments also contained the provision that they would be implemented concurrently with the ITS amendments. This was necessary because the technical review of CTS Section 3.7 formed the basis for the review and acceptability of ITS Section 3.8, Electrical Power Systems. During the review, a number of unresolved items were identified that did not affect the approval of the amendments, but needed to be addressed during the review of ITS Section 3.8.~~

~~An additional correspondence relating to these issues was provided to the licensee by staff letter dated May 22, 1998, and the licensee responded by letter dated August 13, 1998. In addition, conference calls with the licensee to discuss these issues occurred~~

48

on August 10, 1998 and September 8, 1998. The following discussion addresses these issues.

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a. Relocation of the Required Keowee Reservoir Minimum Level from the TS Bases to the TS

The Bases for TS 3.7.1, "AC Sources - Operating," identifies the required minimum Keowee Reservoir level necessary for operability of the Oconee overhead and underground emergency power paths. Criterion 2 of 10 CFR 50.36 the Commission's final policy statement provides guidance regarding which TS requirements are to be retained in TS. This criterion notes that a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis should be retained in TS. In this regard, the staff felt that the required minimum Keowee Reservoir Level of $\geq$ 775 feet should be relocated from the Bases for the TS to the TS itself.

In the ITS Section 3.8 submittal, the licensee added a note to the limiting condition of operation (LCO) for Section 3.8.1. This note indicates that the minimum Keowee Reservoir level must be $\geq$ 775 feet. This action resolved the concern for TS Section 3.7.

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b. Design Basis Loading Limits and Attendant Measures to Ensure That the Loads on the Cold Shutdown Unit Are Maintained Within These Limits If a Startup Transformer Is Shared Between Two Units for Greater Than 72 Hours

The staff noted that the CTS permits sharing a startup transformer between two Oconee units for 72 hours. However, at the end of this 72-hour period, the shared startup transformer must be dedicated to the operating unit and cannot be shared with the unit in cold shutdown. Consequently, the revised TS Section 3.7.1 is consistent with the TS prior to the revision, except that it permits a startup transformer to be shared between an operating unit and a unit in cold shutdown for greater than 72 hours. The Bases for TS Section 3.7.1 notes that one unit above cold shutdown and a unit in cold shutdown may share a startup transformer indefinitely provided that the loads on the cold shutdown unit are maintained within acceptable design basis limits. However, the Bases for TS Section 3.7.1 does not explicitly define the acceptable design basis loading limits for the cold shutdown unit, nor are there provisions to ensure these limits are not exceeded.

The licensee explained that the design loading limits of the startup transformer are based on the transformer load ratings. The normal operating load ratings for the two low side windings of each startup transformer are 6900 volts, 2820 amperes and 4160 volts, 4660 amperes. The station normal power operating procedure provides limits and precautions to the operator that include the normal operating limits for a startup transformer. This procedure also contains the temporary 30 minute loadings of 7500 volts, 4000 amperes and 4400 volts, 5000 amperes for the two low side windings. The removal and restoration of auxiliary electrical systems operating procedure provides the instructions to the operators for sharing a startup

48

transformer between two units. The first part of this procedure provides instructions for aligning an operable startup transformer to two units. Once a startup transformer is supplying loads for another unit, this procedure requires the operators to check the current and voltage per the limits and precautions contained in the normal power operating procedure. The next part of the removal and restoration of auxiliary electrical systems procedure requires the operators to reduce the loading on the startup transformer by removing unnecessary loads. In addition, a shared startup transformer is monitored several times a shift to preclude exceeding the oil and winding temperature limits. This clarification information resolved the concern.

c. Second Offsite Power Circuit

Although not addressed in the CTS, the staff expressed concerns regarding the second offsite power circuit (for each Oconee unit) described in the UFSAR. As described, this circuit is from the 230 kV switchyard to the main feeder buses by way of the main step-up and unit auxiliary transformers. Within the context of a loss of coolant accident, the staff requested that the licensee provide information regarding the role of this circuit path being available in time so that specified acceptable fuel design limits and conditions are not exceeded. The staff also requested information relating to the capability and capacity of this second circuit path, and why it is not included in the CTS.

In response to these concerns, the licensee explained that the UFSAR states that the second circuit is designed to be available in time following a loss of coolant accident to ensure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. The UFSAR statement concerning the second circuit being available in time following a loss of coolant accident to ensure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded, is not in the correct context.

A review of the original final safety analysis report shows that a description of the second circuit was provided. As described in the original UFSAR, the second circuit is the path from the switchyard through the main step-up transformer with the generator disconnected from the main bus. This second circuit is designed to be available in time following a loss of coolant accident to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded and are consistent with the safety analysis of the unit as described in UFSAR Section 14.1.2.8.3. This section of the original UFSAR indicates that the analysis of the fuel design limits and reactor pressure boundary limits is for the loss of all station power except for the station batteries. The analysis of the loss of all station power except for the station batteries indicates that the pressurizer relief valves would open and the pressurizer would be filled with reactor coolant in 23 minutes without any emergency feedwater actuation or emergency condenser cooling water gravity flow. The opening of the pressurizer relief valves and filling of the pressurizer with reactor coolant would result in a loss of coolant accident. The original UFSAR indicates that the turbine driven emergency

48

feedwater system and emergency condenser cooling water system would automatically actuate during the loss of power and core protection is assured for the unlikely condition of total loss of station electric power. From the information in the original UFSAR and the associated UFSAR safety analysis, the time requirement for the second circuit to the offsite power sources being available is based on a loss of all station power which would lead to a loss of coolant accident.

In a 1982, the entire document was updated and reformatted. The information on the second circuit to the offsite power sources was relatively unchanged. However, the reference to the safety analysis of the loss of all station power was removed from the statement addressing the time requirement for the second circuit. This incorrectly changed the context of the statement concerning the availability of the second circuit to imply that the second circuit was required following all loss of coolant accidents. In a subsequent update of the UFSAR in 1993, the safety analysis of the loss of all station power was replaced with a station blackout analysis. The station blackout analysis is contained in Section 8.3.2.2.4 of the UFSAR and outlines the use of the Standby Shutdown Facility (SSF) to mitigate a station blackout while preventing a loss of coolant accident from occurring. The safety analysis information that was associated with the time requirements for the second circuit to the offsite power sources was removed from the UFSAR, since it was replaced with the response to the station blackout rule. Thus, the second circuit to the offsite power sources is not required for mitigation of a loss of all station power and the resulting loss of coolant accident. The licensee has initiated action to ensure that the UFSAR is updated to correct the statement concerning the requirement for the second circuit to be available following a loss of coolant accident. Although the second circuit is not required for any accident mitigation, this circuit is available and provides a manual diverse power path that should be considered for inclusion in the UFSAR.

Regarding the capability and capacity of the second circuit power path, the licensee explained that the auxiliary transformer is sized to carry all the auxiliary loads of the associated plant unit during power generation. The main feeder bus normally receives power through the auxiliary transformer while generating to the grid. During refueling outages, the respective unit's auxiliary transformer is aligned to backfeed the main feeder buses to supply the refueling shutdown loads. These activities demonstrate the capability and capacity of the second circuit. Following a loss of coolant accident, the engineered safeguards loads, which would be less than loads required for power generation, are supplied by offsite power through the startup transformer or by the onsite emergency power paths. During the recovery from the loss of coolant accident, the electrical loads could be manually transferred to the auxiliary transformer if necessary. The alignment of the second circuit to the main feeder buses to supply post accident loads during the recovery from a loss of coolant accident has been analyzed and determined to be an adequate power source.

Concerning the observation that the second offsite power path circuit is not included in TS, the licensee explained that the TS are intended to address the requirements

48

for offsite power sources that supply the 230 kV switchyard. Two of these sources are required to be available to meet the TS requirement to consider offsite power available. In addition, the TS require the startup transformer circuit to be operable to ensure that offsite power is available to a unit during an accident. As noted above, the UFSAR describes the second offsite power path circuit from the switchyard to a unit by using the unit associated step-up and auxiliary transformers. The as built design includes the second offsite power path circuit from the switchyard to a unit as described in the UFSAR. However, the second offsite power circuit through the step-up transformer and auxiliary transformer is not required for accident mitigation. Since only the circuit through the start-up transformer is required for accident mitigation, the second circuit through the auxiliary transformer is not included in the TS. However, the licensee has initiated actions to correct the error in the UFSAR statement concerning a time requirement for the second circuit and the requirement of the second circuit for accident mitigation.

48

Although the licensee response clarifies the UFSAR statement, it does not establish the backfeed circuit as a second offsite power circuit that can be made available to the safety buses in time such that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. However, the licensee response clearly indicates that by crediting the SSF, the backfeed circuit provides a manual diverse power path that can be made available in time to preclude exceeding specified acceptable design limits and conditions. In addition, a dedicated power path from the Lee Steam Station to the safety buses can be made available within one hour and the capability and capacity of this power path must be demonstrated by surveillances included in the TS.

In view of these multiple provisions, we conclude that the backfeed circuit need not be included in TS. However, since the backfeed circuit does provide a manual diverse power path for the safety buses that may be used during recovery operations if necessary, this power path circuit is addressed in the Bases for TS Section 3.8.

d. Lack of TS Provisions for Main Feeder Bus Monitoring Circuitry

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The initially proposed TS 3.7 submittal stated that the main feeder bus (MFB) undervoltage relays provide inputs to load shed and transfer to standby logic. However, this submittal also indicated that the function of the MFB monitor undervoltage relays (three per bus) was determined to be non-safety related by the 4 kV design basis document. Requirements for operability of these relays were replaced by requirements for operability of the MFB undervoltage relays (one per bus) that provide the safety input to the transfer function. From this descriptive information, it was unclear how the MFB undervoltage relays are to provide the safety input to the transfer function circuitry and, as such, replace the MFB monitor undervoltage relays. In addition, the proposed 3.7 TS did not address the MFB monitoring relays, whereas the referenced TS did address these relays. The staff also noted that the MFB monitoring relays provide input to control logic circuitry designed to automatically start the Keowee units.

(44)

The staff questioned the technical adequacy of one MFB undervoltage relay per MFB. In addition, the staff requested that the licensee explain how confirmation that the load shed, transfer, and retransfer functions can be performed with or without operating the MFB undervoltage monitoring relays. The licensee responded that the MFB undervoltage monitoring relays are non-safety related. The undervoltage relays associated with normal, startup, and standby bus monitoring in the EPSL control logic are quality assurance (QA) Condition 1. These relays sense voltage from different potential transformers and operate to perform different and independent functions. The MFB undervoltage relays operate for those units experiencing only a loss of offsite power. The EPSL undervoltage relays are an integral part of the power seeking logic for the unit experiencing a LOCA. Further, the use of one undervoltage relay per MFB is adequate since the design meets the single failure criterion. The licensee also supplied electrical schematic diagrams that showed the QA Condition 1 control logic circuitry.

The staff continued to express concern regarding removing the MFB undervoltage monitoring relays from the TS since these relays provide input to control logic circuitry that is designed to provide control actions for loss of power to the MFBs. Thus, for loss of power to the MFBs, the licensee was requested to provide additional information to show that necessary control actions to restore power should occur without the MFB monitoring undervoltage relays operating. In essence, the licensee response to this request was that the MFB monitoring circuitry is not within the Oconee licensing basis and that manual operator action is credited for this circuitry function. In response the staff noted that Criteria 3 and 4 of the Commission's interim and final policy statement, as well as 10 CFR 50.36, provide guidance regarding what is to be retained in the TS. Criterion 3 notes that it is the Commission's policy to retain in TS a system that is part of the primary success path and functions to mitigate a transient that presents a challenge to the integrity of the fission product barrier.

The staff also noted that the intent of this criterion in the electrical area is to focus on hardware item response, particularly in the initial stage of a need for the function. Further, Criterion 4 of the 10 CFR 50.36 final policy statement addresses operating experience. Within this context, and on previous occasions for localized plant centered loss of electrical power, the MFB monitoring panel circuitry performs a very useful and necessary function in restoration of power to the main feeder buses. A localized plant centered loss of power occurrence has been found to be much more likely than an area-wide grid disturbance for which additional hardware has been designed for power restoration. For these reasons, the staff continued to believe that measures to ensure a continuing high degree of functional performance for the main feeder bus monitoring panel circuitry are necessary. In response to these concerns, the licensee stated that the main feeder bus monitoring panel circuitry is not viewed as satisfying the requirements in Criterion 3 or 4 of 10 CFR 50.36 for inclusion in TS. However, the licensee stated that the main feeder bus monitoring panel will be included in the Oconee TS with a request to increase the allowed outage time. This licensee action has been added to the Improved TS Section 3.8 by Supplement 4, which has been reviewed as Beyond Scope Item No. [??????]

49

e. TS Surveillance Testing and Setpoints for Loss of Power Sensing Relays for the Main Feeder Buses

The staff expressed a concern that CTS Section 3.7 did not include surveillance testing and trip setpoints for loss of power sensing relays for the main feeder buses (MFBs). The licensee explained that surveillance testing for loss of power sensing relays for the MFBs is included in TS Section 3.7. This testing is addressed by Surveillance Requirement (SR) 3.7.1.14, Emergency Power Switching Logic (EPSL) Functional Test. The MFB monitor panel circuit testing will be addressed in ITS Section 3.8, and SR 3.7.4.1, EPSL Voltage Sensing Circuits Channel Test. The EPSL functional test verifies the source and MFB voltage sensing. This testing also verifies that a loss of voltage can be detected and the emergency loads transferred to the appropriate power source, which verifies the functionality of the voltage sensing relays associated with EPSL. The MFB monitoring panel circuit testing will consist of a verification of the relay actions and associated alarms and timers. The EPSL voltage sensing circuits channel test verifies operability of each sensing circuit attendant to each MFB. The trip setpoint values for the undervoltage relays are verified as a prerequisite to the surveillance. This information resolved the concern regarding TS surveillance testing for loss of power sensing relays for the MFBs.

f. Constraints for DC Capacities and Single Failure Criterion That Provide the Bases for the DC Sources Limitations Specified in TS Section 3.7.8

The LCO for TS Section 3.7.8, "DC Sources - Operating," is consistent with the current TS. However, it was unclear as to the constraints for DC capacities and single failure criterion that provide the bases for the DC sources limitations specified. The licensee explained that the DC system is designed with the DC sources interconnected by isolating transfer diodes. With this design, each Oconee unit does not require both of the two unit specific DC sources to be operable in order to mitigate an accident. For two or more units operating, only four of the six DC sources are required by design to meet the DC capacity requirements for a unit to mitigate an accident. To meet the DC capacity requirements while considering a single failure, five of the six DC sources are required to be operable. For a single unit operating, three DC sources are required to be operable to meet DC capacity requirements for mitigation of an accident. Each unit, including the shutdown units, is required to have one DC source operable so that capacity requirements are met. If one unit does not have an operable DC source, this situation will drain power from the backup unit which could result in preventing the DC system from being able to mitigate an accident. To meet the DC capacity requirements while considering a single failure, four of the six DC sources are required to be operable. This clarification resolved the concern by noting design constraints considering DC capacities and single failure criterion provide the bases for the DC source limitations specified in TS Section 3.7.8.

g. Monthly TS Surveillance for the Individual Diode Monitors in the DC Instrumentation and Control Power System

49

The current TS require monthly verification that the operability of the individual diode monitors in the instrumentation and control (I&C) power system are to be verified by imposing a simulated diode failure signal on the monitor. In reviewing this, the staff requested that the licensee provide technical justification for not including this surveillance in the proposed TS. The licensee response to this request was that currently a test is performed on the 125 vdc I&C panelboard diode monitors. This test indicates the operability of the diode monitoring failure lamps and remote alarms, but does not indicate the operability of the diodes or the monitoring circuit. The diode monitoring circuit test provides a lamp and alarm test only and provides no indication of the functioning of the diodes. SR 3.7.8.2 is the test of the diodes that ensures operability. Therefore, the surveillance for the diode monitoring circuit has been removed from the proposed TS. However, testing of the diode monitoring circuit will continue to be performed as part of the preventive maintenance program. This suggests that the current surveillance may not verify the operability of the monitoring circuit and, as such, this circuit may not detect failures in the 125 vdc vital I&C auctioneering diodes. The licensee response to this issue was that the current surveillance for the individual diode monitors injects a diode failure signal by use of a monitor test pushbutton. During the surveillance, proper operation of the diode monitor circuits is verified by ensuring that the appropriate lamps are illuminated and the appropriate alarms are received. This clarification resolved the concern.

45

h. Lack of Battery Performance Discharge Test Surveillance

The staff expressed a concern with the proposed TS in that they do not require performance discharge testing of vital I&C batteries. Thus, the staff requested that the licensee provide additional technical information explaining why it is unnecessary to perform battery performance discharge testing. The licensee response to this request is that an IEEE-Standard 450-1975 battery discharge test is performed on a 5-year cycle as described in a design basis document. However, this testing is not committed to in the licensing basis for Oconee. Further, the licensee explained that the results of this test do not indicate the operability of the batteries. The test is performed to assist in predictive maintenance of the batteries and to indicate the need for new batteries in the future.

The IEEE 450-1975 standard indicates that the initial battery performance test should be performed within two years of initial installation and every five years thereafter. When battery performance degrades below 90 percent, the battery performance test frequency should be changed to annually. When battery performance degrades to 80 percent , the standard indicates that the battery should be replaced. However, the Oconee procedures require an operability evaluation of the batteries if the test results are below 80 percent. The results of this evaluation determine whether or not the battery is operable. Following the evaluation, corrective actions are initiated to upgrade the battery or replace the battery within an appropriate time frame.

However, the staff continued to express concern regarding the lack of a TS surveillance for battery performance discharge testing. The staff also noted that in the development

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~~of the revised STS, the issue of whether battery performance discharge testing results provided information relating to battery operability was discussed with the industry. During these discussions, the NRC staff noted that battery capacity degrades near the end of its life and the battery may be capable of passing a battery service test, but not capable of passing the next scheduled service test due to rapid battery capacity degradation. Thus, the plant could be operating for a period of time when the battery is unable to meet its design requirements.~~

~~As a result, the NRC staff determined that battery performance discharge testing is related to battery operability and should be included in the TS. In response to this concern, the licensee included battery discharge testing program in the ITS. This action has been included in Supplement 4 to the ITS Section 3.8 submittal and reviewed as Beyond Scope Item No. [??????]. This licensee response resolved the concern.~~

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~~2.~~ Amendments Approved During The ITS Review

During the review of the ITS amendment application, the following amendments were approved, issued, and implemented. To ensure none were lost in the conversion process, the licensee ensured that each had been incorporated, if and as necessary, into the ITS amendment.

a. Steam Generator Alternate Repair Criteria, Amendment Nos. 227, 227, and 224 (Units 1, 2, and 3 respectively), issued November 21, 1998.

b. Refueling Outage Surveillance Frequency Change, Amendment Nos. 228, 229, and 225 (Units 1, 2, and 3 respectively), issued February 26, 1998

c. One Time Extension of Specified Test and Calibration Surveillances, Amendment No. 228 (Unit 2), issued February 23, 1998.

d. Emergency Condenser Circulating Water System, Amendment Nos. 229, 230, and 226 (Units 1, 2, and 3 respectively), issued April 24, 1998.

e. Steam Generator Tube End Anomalies Amendment Nos. 230 and 227 (Units 1 and 3 respectively), issued July 1, 1998.

f. Penetration Room Ventilation System Flow Instrumentation Surveillance, Amendment Nos. 231, 231, and 228 (Units 1, 2, and 3 respectively), issued August 7, 1998.

53

g. Main Steamline Break Detection and Feedwater Isolation Circuitry Modification, issued ????]

h. One Time Extension of Certain Specified Surveillances Due to Outage Schedule Change, Amendment No. 230 (Unit 3), issued August 28, 1998.

i. One Time Extension of Snubber Surveillance Due to Outage Schedule Change, Amendment No. 229 (Unit 3), issued August 26, 1998.

j. Emergency Electrical System, Amendment Nos. 232, 232, 231 (Units 1, 2, and 3 respectively), issued September 3, 1998.

J. Review of Oconee UFSAR Chapter 15 Transient Analysis Methodology (Topical Report No. DPC-NE-3005 (TAC Nos. M99349, M99350, AND M99351)

By letter dated July 30, 1997, the licensee submitted Topical Report DPC-NE-3005-P, "UFSAR Chapter 15 Transient Analysis Methodology," for staff review and approval. Additional information was supplied by letter dated July 23, 1993. The report described the methodology Duke Energy Corporation used to analyze the non-Loss of Coolant Accident UFSAR Chapter 15 transients and accidents for the Oconee Nuclear Station Units 1, 2, and 3. The objective of the report was to implement a revised non-LOCA transient and accident analysis methodology and establish a new licensing basis for Oconee. By letter dated October 28, 1997, DEC indicated that ITS Specifications were dependent upon the approval of the "UFSAR Chapter 15 Transient Analysis Methodology."

SO

By letter dated October 1, 1998, the staff indicated that the staff had reviewed the topical report and found it acceptable with some exceptions as explained in the safety evaluation enclosed with the letter. These exceptions will be addressed in a revision to the topical report that will be submitted at a later date. However, none of these exceptions are related to the ITS conversion. The methodology described in the topical report that is related to the ITS conversion has been found to be acceptable, as described in the safety evaluation.

K. Review of Thermal-Hydraulic Transient Analysis Methodology (Topical Report No. DPC-NE-3000) (TAC Nos. MA1127, MA1128, AND MA1129)

By letter dated December 23, 1997, the licensee submitted Revision 2 to Topical Report DPC-NE-3000-PA, "Thermal-Hydraulic Transient Analysis Methodology," for NRC staff review and approval. The report describes changes to thermal-hydraulic transient analysis methodology that are due to: (1) simulation model revision to reflect the new Mk-B11 fuel assembly design, (2) application of the new critical heat flux correlation (BWU-Z with the Mk-B11V multiplier), and (3) several RETRAN model improvements. This methodology provides support for the "UFSAR Chapter 15 Transient Analysis Methodology" discussed above. Accordingly, the associated ITS Specifications are dependent upon approval of the "Thermal-Hydraulic Transient Analysis Methodology."

SO

As explained the the safety evaluation contained in the staff's letter dated October 14, 1998, the staff determined that the revisions incorporating the Mk-B11 fuel assembly design, BWUZ critical heat flux correlation with the Mk-B11V multiplier, and RETRAN model were acceptable for applications to non-LOCA transient and safety analysis.

L. Quality Assurance (QA) Program Submittal Review

By letter dated April 8, 1998, the licensee submitted Amendment 23 to the Duke Energy Corporation Topical Report, "Duke-1-A, Quality Assurance Program." The amendment contains, among other changes, numerous changes made necessary by conversion of the current TS to the ITS. The licensee stated in the submittal the none of the changes involve any reduction in commitments currently within the licensee's Quality Assurance Program (QAP). Therefore, the review was limited to the appropriateness and completeness of the relocated requirements and does not address the adequacy of the QA topical. The submittal was revised by letter dated May 25, 1998.

The staff reviewed the following items that the licensee proposed to relocate to Amendment 23 of the QA topical report. The review is based primarily on the guidance of Administrative Letter (AL) 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance." For items not specifically addressed by AL 95-06, review is based on the guidance provided by 10 CFR 50.36 ~~the Commission's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors (59 FR 39132)~~ regarding the criteria for TS inclusion. (8)

- TS 6.3.2 and TS 6.3.3 to QAP Section 17.34.2.13
- TS 4.5.1.2.2 to QAP Section 17.34.2.8 (S2)
- TS 4.7.1.b to QAP Section 17.34.2.8
- TS 4.20.3.a.1 to QAP Section 17.34.2.8
- ~~TS 6.1.1.9 to QAP Section 17.4.3.2.4~~ (S1)
- TS 6.1.2.1.a, c, d, i, j to QAP Section 17.34.2.14
- TS 6.1.2.1.b to QAP Section 17.34.2.2 (S2)
- TS 6.1.2.1.e to QAP Section 17.34.2.10
- TS 6.1.2.1.f, g, h to QAP Section 17.34.2.13
- TS 6.1.2.1.k to QAP Section 17.34.2.15
- TS 6.1.3.1, TS 6.1.3.2, TS 6.1.3.3, TS 6.1.3.5.a, b to QA Section 17.34.3.2.1
- TS 6.1.3.4, TS 6.1.3.5.d to QAP Section 17.34.3.2.3 (S2)
- TS 6.1.3.5.c to QAP Section 17.34.2.15
- TS 6.2 to QAP Section 17.34.2.13
- TS 6.4.1.n, o, p, TS 6.4.2, TS 6.4.3 to QAP Section 17.34.2.14

- TS 6.5 to QAP Section 17.2.15 (52)

The staff has determined that the proposed relocation of the TS administrative control requirements to the licensee's Quality Assurance Program as it pertains to the ITS program is acceptable. Subsequent changes to these requirements will be controlled through the established quality assurance program change control process in 10 CFR 50.54(a).

Principal Contributors: (?)

Date:

ENCLOSURE

DUKE COMMENTS ON DRAFT ONS ITS SE

Safety Evaluation

1. SER states that significant changes were proposed to the CTS Bases. CTS Bases were completely replaced. The statement implies that they were converted and should be deleted.

2. In second paragraph of Part 2.0 the following sentence fragment should be deleted: "Statement of Consideration, "Technical Specifications for Facility Licenses; Safety Analysis Reports, "33 FR 18610 (December 17, 1968." This phrase is not tied to any statement.

3. SE is formatted into 3 parts: 1.0 INTRODUCTION, 2.0 BACKGROUND and III. EVALUATION. These should be consistent - suggest change "III" to "3.0." Also, next to last paragraph of the introduction (1.0) refers to part III of SE. Need to change to "3.0."

4. Reference to the August 13, 1998 RAI response should be replaced with Duke's October 21, 1998 RAI response. The August 13 RAI response was related to the 3.7 rewrite TS change (Amendment Nos. 232/232/231) and is only pertinent to the ITS conversion as it relates to Duke's commitment to include a specification for the main feeder bus monitoring panel and an SR for battery discharge performance testing.

5. Part III.A, last paragraph; indicates that the summary descriptions for Bases changes were noted as "Not Applicable" since they do not constitute an administrative change in TS requirements. However, Table A does not indicate this for Bases changes. Suggest the sentence be removed or Table A be revised to reflect this.

6. Part III.C - Category IV which is entitled "Allowed Outage Time Added," would more appropriately be named "ACTION Added" consistent with the terminology used in ITS. Also, change all L tables (footers) to reflect this change.

7. Part III.C - Category V, "Relaxation of Required Actions to exit Applicability." This category is used only once. Suggest deleting category and moving Category VIII to take its place to minimize the impact on "L" Tables. 3.4 L16 should be re-categorized as Category IV or made unique. Also, change all L tables (footers) to reflect this change.

8. Minor editorial changes.

9. Use of "limits" and "protective limits" is inappropriate and should be replaced with requirements.

10. Part III.C, Category I discussion, 2nd paragraph, 2nd sentence - The statement that the TS "are" satisfied by exiting the applicability

should be changed to "may be" satisfied since this statement is not always true. For example ITS 3.7.5 does not require exiting the Applicability when no EFW capability exists.

11. Part III.C, Category II discussion, 1st paragraph, 2nd sentence - Sentence confusing as written, suggest deleting "due to test which also increases equipment availability" since it is redundant to first part of sentence.

12. Section 1.0 L2, next to last sentence. Need to clarify or delete next to last sentence starting with "Additionally, RTD and thermocouple output readings . . . " Not clear what is meant by "in the same manner as that of other sensors." Recommend rewording consistent with the DOC.

13. Section 2.0 L2. A Safety Limit violation report was not a "Reportable Occurrence" which is replaced by 10 CFR 50.73. The "Reportable Occurrence" referred to in 50.73(g) is referring to the 14 and 30 day reports which were in the Tech Specs prior to 10 CFR 50.73. The SL violation reports were separate from the 14 and 30 day reports. Recommend rewording consistent with DOC.

14. Section 3.2 L2. The next to last sentence, as written, is confusing and not consistent with the DOC. Recommend rewording consistent with DOC.

15. Section 3.3 L8. In next to last sentence, the description is unclear and not consistent with the DOC. Recommend rewording consistent with DOC.

16. Section 3.3 L21, L22, L23 and L24. Reference to Category A and B instrumentation should be Type A and B. The discussion for L22, L23 and L24 indicates that the instrumentation is all Category B. This instrumentation is Category I Type A, B, and C. The justification based on the instrumentation being Category B is not valid. Replace with justification provided in the DOCs.

17. Section 3.3 L33. The manual start function is also required "during movement of irradiated fuel assemblies." Also, the justification related to surveillance being performed for other reasons is not relevant and not the basis for the change. The basis for change is that accident analyses do no credit manual Keowee start during operation above cold shutdown.

18. Section 3.5 L4. Discussion related to "degraded conditions" is incorrect and should be deleted.

19. Section 3.6 L1 - These values must be changed to be consistent with the ITS and Bases.

20. Section 3.6 L4 - The last three sentences of this discussion are the same as the first three sentences. Revise to be consistent with DOC and

provide bases for Action that allows one hour to restore.

21. Section 3.8 L1 - The discussion provided is not consistent with the DOC. Recommend revising to be consistent.

22. Section 3.9 L2 - The last sentence states that changes are consistent with the NRC design requirements for fuel handling accidents that do not impose the single failure criterion as applied to other design basis accidents. Since this statement is not consistent with the DOC and is not needed to justify the change it should be deleted.

23. Duke did not relocate any TS requirements to controlled design documents and drawings. Therefore, mention of these should be replaced with other documents where requirements were relocated, i.e., QA Topical Report, COLR, and IST Program.

24. The second sentence of the discussion of Type 2 relocated less restrictive requirements should be revised to refer to "applicable procedures" in lieu of "plant operating procedures" consistent with ITS 5.4.1.a wording.

25. The third sentence of the discussion of Type 3 relocated less restrictive requirements should be revised to refer to "plant procedures" rather than trying to address each type of procedure.

26. The third paragraph of the discussion of Type 4 relocated less restrictive requirements should be revised to refer to ITS 5.6.5 as the change control for the COLR and 10 CFR 50.55a as the change control for the IST program.

27. The last sentence of the first paragraph of III.E, Relocated Specifications, should be deleted. The method of implementation of SLC requirements is not relevant to the ITS conversion.

28. The next to last sentence of the second paragraph of III.E, Relocated Specifications, indicates that a characterization of the discussion of changes is provided in Table R. This is not included in Table R, therefore this statement should be deleted.

29. Relocated requirement CTS Table 4.1-1 discussion needs to be revised to include relocation of CTS 3.3.3 requirements related to CTS level and pressure instrument channels.

30. Provides clarification regarding bases for relocation of requirements associated with Radiation Monitoring Instrumentation.

31. Discussion regarding relocation to procedures and associated change control does not appear appropriate and should be deleted since ONS did not relocate items to procedures. NRC audit plans for relocated items does not appear relevant to approval of ITS conversion and should be

deleted.

32. Reference to temporary procedure changes appears to be unrelated to conversion.

33. Provided clarification of commitment regarding relocation of information to UFSAR Chapter 16.

34. Deleted unnecessary information related to details of implementation.

35. Removed discussion related to proposed change which was withdrawn in Supplement 3 at NRC's request.

36. Removed discussion related to proposed change which was withdrawn in Supplement 3 at NRC's request.

37. Information added to fully describe change.

38. Need to indicate that the NUREG specification combines the EFW system initiation circuitry and main steamline break and main feedwater isolation instrumentation separately consistent with what was done for the subsequent beyond scope item. Need to indicate that the expanded applicability is beyond scope since requiring the EFW pump initiation circuitry to be OPERABLE in MODE 4 when relied upon for decay heat removal is a more restrictive requirement with no comparable NUREG requirement. For the subsequent beyond scope change, need to clarify that there is no directly comparable action in the NUREG.

39. It is not clear where this information originates. Appears to be extraneous information unrelated to ITS conversion and should be deleted.

40. Conversion to ITS is identical to NRC approved change described in safety evaluation for Amendment Nos. 232, 232 and 231. Since ITS involves no change, this discussion is not related to ITS conversion and should be deleted. This DOC was removed by Supplement 4.

41. Deleted background discussion regarding staff practice with respect to movement of RCS flow rate to the COLR. This discussion does not apply since RCS flow rate is not controlled in the CTS.

42. Deleted discussion related to ITS 3.5.3 Action D. This Action has been removed by Supplement 4.

43. The statement regarding proposed change being consistent with CTS is not accurate and should be deleted. An alternative discussion is provided based on the associated DOC.

44. Added description and evaluation information for beyond scope change number 16; Specification for Main Feeder Bus Monitor added as 3.3.23.

Deleted item 1d from Evaluation of other TS changes. The information presented here involves CTS 3.7 revision information. It should be deleted since it is not related to ITS conversion.

45. Added description and evaluation information for beyond scope change number 17; performance of battery discharge testing. Deleted item 1h from Evaluation of other TS changes. The information presented here involves CTS 3.7 revision information. It should be deleted since it is not related to ITS conversion.

46. Added description and evaluation information for beyond scope change number 18; removal of allowance to shut down unit under 3.8.1 Action when Required Action and associated Completion Time not met. This item was not included in the draft SER and suggested wording, based on the associated DOC, is provided.

47. Added description and evaluation information for beyond scope change number 19, Keowee Lake Level added to LCO 3.8.1. Deleted item 1a from Evaluation of other TS changes. The information presented here involves CTS 3.7 revision information. It should be deleted since it is not related to ITS conversion.

48. This is CTS 3.7 revision information. It should be deleted since it is not related to ITS conversion.

49. This is CTS 3.7 revision information. It is not related to ITS conversion.

50. Added discussion which relates NRC approval of "UFSAR Chapter 15 Transient Analysis Methodology" and "Thermal-Hydraulic Transient Analysis Methodology to ITS conversion.

51. TS 6.1.1.9 requirements related to what organization fulfills the Operating Experience Review function were deleted, not relocated.

52. SE reference to QA Topical Report Section 17.3 needs to be changed to Section 17.4 to correlate to the current numbering sequence.

53. Add amendment information to item g, MSLB Detection and FDW isolation Circuitry modification.

Safety Evaluation Tables

1. Table R - 3.7 R3 and 3.7 R6 were not used. Need to revise column for change control to delete reference to 50.59.

2. Table LA indicates that the change control method for 3.2 LA1 is 50.59. Change to ITS Chapter 5, consistent with Attachment 7 to the ITS Submittal cover letter and Supplement 5 to Section 3.2 Discussion of

Changes.

3. Revise Table LA as follows to include 5.0 LA23 and LA24, which were added by Supplement 4:

   LA23 Requirements for operating the PRVS fans at design flow rate ± 10% every 18 months.

   LA24 Details of the method of ventilation system filter testing.

   Both are change Type 3, relocated to UFSAR Chapter 16 with 50.59 as the change control process.

4. Revise footer in Table LA to indicate that Type 3 changes are "Procedural Details for Meeting TS Requirements and Related Reporting Requirements" consistent with change recommended for Safety Evaluation.

5. Revise footer in all Table L's to incorporate changes recommended by Comments 6 and 7 to the Safety Evaluation. (i.e., Revise Category III to state "ACTION added." Remove existing category V and move category VIII to be category V. Revise 3.4 L16 to category IV.)

6. Revise L36 in Table L for Section 3.3, consistent with Supplement 5 change, as follows:

   CTS Table 3.5.1-1, Column D requires the unit to be in Hot Shutdown within 24 hours when one or more TSV Closure Instrumentation channels is inoperable and Note (e) to the Table requires the unit be placed in Cold Shutdown within the following 72 hours if the minimum conditions are not met. These actions were changed; the changes resulted in a relaxation of the Required Actions in that a shutdown to MODE 3 and MODE 4 is not required when the TSVs are closed and that a shutdown to MODE 5 is no longer required.

   Change category to I.

7. Revise M22 in Table M for Section 3.3, consistent with Supplement 5 change, as follows:

   CTS Table 3.5.1-1, Column D requires the unit to be in hot shutdown (MODE 3) within 24 hours when one or more TSV Closure Instrumentation channels is inoperable and Note (e) to the Table requires the unit be placed in Cold Shutdown (MODE 5) within the following 72 hours if the minimum conditions are not met. This was changed to require the TSVs to be declared inoperable. The ITS then requires entry into 3.0.3 when in MODE 1 or entry into Specification for TSVs when in MODE 2 or 3. The subsequent completion times are more restrictive since the unit must be in MODE 2 within 13 hours of an inoperable TSV Closure instrumentation channel where CTS required the unit be in hot shutdown (equivalent to ITS MODE 3) within 24 hours. ITS 3.7.2 Action C then allows 8

additional hours to close an inoperable TSV when in MODE 2 or 3, for a total of 21 hours initial discovery of the instrument channel being inoperable in MODE 1 (or a total of 9 hours if discovered inoperable in MODES 2 or 3). In addition, if the TSVs were not closed, then an additional 12 hours (on top of the eight hours) is allowed to place the unit in MODE 3 and 18 hours to place the unit in MODE 4. This results in allowing a total of 33 hours to be in MODE 3 and 39 hours to be in MODE 4 from initial discovery of it being inoperable in MODE 1 (or a total of 21 hours (MODE 2 only) to be in MODE 3 and 27 hours to be in MODE 4 if discovered inoperable in MODES 2 or 3).

8. Revise 3.10 A6 in Table A, to be consistent with Supplement 5 change, as follows:

CTS 4.20.1.a requires Inservice Testing (IST) of SSF ASME Code Class 1, 2, and 3 pumps and valves be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code as required by 10 CFR 50.55a(g)(4). The inservice testing includes requirements to verify : a) each SSF pump's developed head at a frequency in accordance with the IST Program; and 2) each SSF valve is OPERABLE. Explicit Surveillance Requirements were added to address these requirements.

The general requirement for testing of ASME Code Class 1, 2, and 3 pumps and valves in accordance with Section 11 of the ASME Boiler and Pressure Code and applicable addenda as required by 10 CFR 50.55a(g)(4) was not retained in the ITS. It duplicates applicable regulations.